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Restores Rhythm...Rejoices Life!
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65% β-cell

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Editor-in-Chief’s Message

Milind Y Nadkar
Editor-in-Chief: JAPI

Dear Esteemed Members of API,

Happy New Year to all of you.

I am delighted to forward this conference issue of APICON 2017. The scientific programme will commence with a CME programme for postgraduates and delegates. Dr. A Muruganathan, Dean Indian College of Physicians has drawn an excellent scientific programme catering to all the Delegates attending the conference. President-Elect Dr. BR Bansode has done a marvelous job by having Scientific programme based on theme ‘Basics to Bedside’. I am sure you will benefit by attending the same in large numbers.

This abstract issue highlights the CME and Scientific Programme of APICON 2017 to be held at Mumbai from 26th – 29th January 2017. This programme will enable the attending delegates to have an overview and plan their scientific hall attendance well in advance.

The conference issue of JAPI contains abstracts for platform presentation and list of poster presentations to be presented during APICON 2017.

I thank the Editorial Board members, and the entire staff of JAPI and API and also each and every member of API for continuous support and guidance.

VR Joshi API Award for Outstanding Referee for the Year 2016

• Dr. Vrinda Kulkarni, Mumbai (M.S.)  • Dr. Simmi Dube, Bhopal, (M.P.)  • Dr. Mrinal Kanti Roy, Kolkata (W.B.)
Hon. Gen. Secretary’s Message

Mangesh Tiwaskar
Hon. General Secretary

Let me, at the outset, wish you and your family members a very Happy and Prosperous New Year 2017.

It gives me great pleasure to forward this issue of JAPI with abstracts of free papers submitted for APICON 2017. This year the number of papers that are submitted speak volumes about the interest shown by the young physicians across India. It also highlights the importance given to the research papers and paper presentations, especially in medical colleges, hospitals and medical research centers in India. All delegates will surely be delighted to read these abstracts before the conference. This will also help the delegates to plan which session to attend during APICON 2017 in advance.

Also the scientific program is printed. JAPI January 2017 issue will reach to members before they start for the conference. This happened due to the perseverance and thoughtfulness of Editor-in-chief Dr. Milind Y. Nadkar, President Elect - Dr. B. R. Bansode and Dean of ICP - Dr. A. Muruganathan have spread a scientific feast before you all. I am sure you all will enjoy this scientific treat.

I am also very happy to quote that JAPI has improved leaps and bounds especially in regards to online submission, its appearance and the quality of articles. Thanks to all the relentless efforts of all the members of the JAPI Editorial Board, especially our Editor-in-chief Dr. Milind Y. Nadkar.

I am grateful to API, especially you members, for giving me opportunity to serve you, as Hon. General Secretary. I promise to try and give my best efforts to fulfill my obligations and expectations honestly, sincerely and as per the API Constitution.

I wish to specially thank Dr. GS Wander, Dr. YP Munjal, Dr. Siddharth Shah, Dr. A. Muruganathan, Dr. BR Bansode, Dr. Sandhya Kamath, Dr. Milind Y. Nadkar, Dr. Shashank Joshi and all my friends for all the selfless help and guidance.

I wish Dr. BR Bansode, President Elect and Chairman Scientific Committee and Dr. Shashank R. Joshi - Organizing Secretary All the Very Best for the conference.

Warm Regards and wishing you all the best.

“WISH YOU ALL A VERY HAPPY AND Prosperous New Year 2017”
President Elect Message

BR Bansode
President-Elect, API and Chairman Scientific Committee, APICON 2017

Theme: ‘BASICS TO BEDSIDE’

It gives me great pleasure to invite you all for the APICON 2017 at Mumbai the financial capital of India. The conference aims to provide a comprehensive scientific programme in keeping with the theme – ‘Basics to Bedside’. In modern era the disease pattern, profile and clinical presentation is changing. Due to media and internet access patients’ knowledge, perception of disease, aptitude and approach to information and expectation from treating Doctors are very high. So in these ever changing combinations of situations and circumstances, we must keep updating ourselves. Nowadays practice of medicine is more towards investigative rather than clinical skills. Keeping in mind the theme of APICON-2017 "Basic to Bed Sides" has evolved and scientific deliberation are relevant to clinical knowledge; encompassing most of Medicine & allied specialties in lucid manner. Most of the prominent National faculty of India and International faculty have been requested to adhere to the theme of conference and have honed their respective deliberation to cover right from basic to recent advances in each topic. The Scientific Committee members from Mumbai Dr. Vikram Londhey, Dr. Nihar Mehta, Dr. Amit Saraf, Dr. Trupti Trivedi, Dr. Ruchit Shah, Dr. R.R. Choudhary, Dr. Falguni Parikh, Dr. Banshi Saboo, Dr. Milind Y Nadkar and Dr. Shashank R Joshi have been helpful in shaping the scientific programme.

The Progress in Medicine, Medicine Update and MCQs Book is edited in Volume III. Dr. Jayant Panda has contributed and edited the MCQs section very well. There will be emphasis and stress on learning the practical aspects of a medical problem, case based discussions and algorithmic approach to a medical disorder, interactive sessions, quiz, symposia and basic Bed side clinical skill will be discuss in the conference. There are 10 workshops (2D ECHO and color Doppler, Valvular Heart disease, Diabetic Foot, Technology in clinical medicine, End of life care, Critical care, Lung and sleep apnea, Poisoning, Ventilator Support system and ECG) which will of immense important for Post Graduate and practicing physician. I am sure these books will be very handy and useful not only in long term for the PG and as a reference book for the busy Practitioners.

It is my appeal to all Speakers and Chairpersons that we should strictly follow the time schedule. For the uniformity all talks are of 20 minutes. We should finish in 15 minutes to leave time for some discussion. The chairpersons will make sure that the timing of the session is monitor strictly. We have a large foreign faculty Doctors Andrew Elder, UK, Asif Naqvi, Hazel R Scott, Donald L Farquhar, Mandish K Dhanjal, UK, Mamun-Al-Mahtab, Bangladesh, Jayanta Chatterjee, UK, Sanjeev Arora, New Mexico, Mrinal Patnaik, USA, Mark Evans, UK and Ashish Thakur.

The national faculty has been chosen considering their original work and experience in the field on which they are speaking. I am thankful to these distinguished “Researcher, master teacher and physicians” from across the country for contributing in the Medicine Update Book and for sharing their views during the APICON 2017.

The programme has been possible due to the guidance of my mentors Dr. Siddharth N Shah, Dr. Y P Munjal, Dr. G.S. Wander and lot of guidance from the past presidents Dr. Sandhya Kamath, Dr A Muruganathan, Dr. Shashank Joshi, and Dr. Rajesh Upadhyay. I must thank the editorial board member for their consent help, guidance and to be associated with me at every step for finalising the Scientific programme of APICON-2017. I hope the programme covers most aspects of medicine which is so diverse that any attempt to even imagine to cover it all would be naive. I would like to thank Dr. Milind Nadkar for having agreed to print oral and poster presentations in the JAPI.

I must thank my wife Mrs. Shobha B Bansode who was tolerant, encouraging and cover my domestic responsibility during the year. I must thank my parent for their blessings, my son Abhijeet, Deepali, Amit and granddaughter Anisha for their unconditional love.

The event and print team of Mr. H.N. Trivedi, Urvi Compugraphic need a special thanks for completing job in time.
I must thank the API staff Sunita Shukla, Narayan Murkar and secretarial staff Ravi Kanoje, Mani Mozhiyan & Khan Jameel for providing help all throughout this year for the update book and the scientific programme. I hope we will have a good attendance and presence of the delegates in the 5 scientific halls, 2 workshops halls, 2 hall for free paper sessions and the well spread out electronic poster in 2 halls. Once again thanking you all, near and dear, friends and well-wishers for having imposed faith upon me.

Lastly my apology for any short coming in APICON-2017

Director PRF’s Message

YP Munjal
Director, Physicians Research Foundation

Dear Sir,

The month of January always brings the memories of meeting one another and sharing the knowledge which has advanced during the year and the research work which has gone on in the past year. In the past 2-3 years the number of free papers has gone up very significantly showing the interest of the research workers in presenting their work in this prestigious conference. Such research work not only enhances the spirit of enquiry but also answers some of the unanswered questions.

The other salient feature of this programme is the scientific deliberations and the postgraduate CME programme in which the original work done by various people, participation by international dignitaries to present their work in free and interactive atmosphere is eagerly awaited by one and all attending the conference. This year the scientific programme is also scintillating and illuminating and certain new features are added to the programme. Dr. B R Bansode and Dr. A Muruganathan need to be complimented for compiling this programme, the scientific bonanza. I would request you to join the programme to find out these new features and give your opinion, ask questions to enhance the knowledge of medicine further for improving in the day to day practice.

The physicians’ research foundation has been founded last year only and during the current year we have given research grants to some research workers. Along with this 2 workshops have been conducted on the research methodology and paper publication in Delhi and Kolkata. I would invite you to participate in these workshops and you can also invite these scientific programmes to be conducted in your state during the current year.

Let us all join in big numbers during this prestigious APICON and make it a grand success!

Long live API!
Dean ICP’s Message

A Muruganathan
DEAN, Indian College of Physicians and Chairman, CME Programme, APICON – 2017

Dear Brothers and Sisters, Greetings!

It always gives great pleasure in sharing knowledge through JAPI and APICON and everyone learns more new points. I have great pleasure in welcoming all delegates coming to APICON 2017. It is a unique opportunity and I request all of you to actively participate, discuss and clear your doubts during APICON Scientific Programme. I congratulate the doctors who have given the abstracts which would ignite more ideas and enlighten the readers. I take this opportunity to congratulate Dr. Siddharth N. Shah, Dr. Shashank R. Joshi, Dr. B.R. Bansode, Dr. Mangesh Tiwaskar and JAPI editor Dr. Milind Y. Nadkar for helping to make 2017 APICON a history and a memorable one. Wish you happy learning.

Thank you.

Serve and Care and Search and Share

Dean-Elect ICP’s Message

Rohini Handa
Dean-Elect, Indian College of Physicians, Chairman, CME Programme, APICON – 2017

Dear colleagues

I am delighted to welcome you to APICON 2017 at Mumbai.

These are exciting times in medicine as better understanding of disease mechanisms and pathogenesis has translated into newer medications and improved treatment strategies. The thrust is on translational medicine. APICONs are multidisciplinary meetings which provide an unparalleled opportunity to meet, discuss and share current concepts with experts and researchers from India and overseas.

The Association headed by Dr. B.R. Bansode, the Indian College of Physicians led by Dr. A. Muruganathan and the Physicians Research Foundation chaired by Dr. Y.P. Munjal have converged at this mega conference. The contemporary scientific programme blends basic and clinical science and caters to the ardent researcher as well as the avid clinician! The Organising Committee under the stewardship of Dr. Siddharth N. Shah and Dr. Shashank R. Joshi has worked hard to provide the right ambience and ensure delegate comfort.

I am sure all participants shall find the scientific programme and the conference academically stimulating and socially rewarding.

With best wishes for the new year.
Organising Secretary’s Message

Shashank R Joshi
Organising Secretary, APICON 2017, Mumbai

Welcome to MUMBAI

“Wherever the art of Medicine is loved, there is also a love of Humanity.” - Hippocrates

I am pleased to welcome you to the 72nd Annual Conference of The Association of Physicians of India. On behalf of the Organising Committee, I welcome you the maximum city of Mumbai (named after Goddess Mumbadevi, later renamed by British era as Bombay and now Mumbai), which is the financial and entertainment capital of India.

The APICON 2017 is being jointly held at at Hotel Renaissance Convention Centre and Hotel Ramada Powai Convention Centre, which is located at Powai, Mumbai between January 26th – 29th 2017. Mumbai was originally a 7 mini island congregate, which later formed Greater Mumbai and which has now transformed into a vibrant metropolis.

The theme of APICON-2017 is “Basics to Bedside”. APICON-2017 will provide a wonderful forum to refresh your knowledge base that can be implemented in the current practice. The Conference will strive to offer plenty of networking opportunities, providing you with the opportunity to meet and interact with the leading scientists and researchers, friends and colleagues as well as sponsors and exhibitors. Over the years the APICON has evolved to become surely the most important National conference dedicated to the emerging science. In this evidence based era, technology has played a key role in bridging the gap between present and futuristic Medical Science. In order to provide an outstanding technical knowledge from Basics to Bedside, we have invited speakers from across the globe. Various workshops will be conducted covering topics like 2D ECHO and colour Doppler, Valvular Heart disease, Diabetic Foot, Technology in clinical medicine, End of life care, Critical care, Lung and sleep apnea, Poisoning, Ventilator Support system and ECG. APICON 2017 is essentially by Indian clinician scientists to enrich your wisdom and clinical sixth sense in all areas of clinical medicine. Apart from latest cutting edge science and path breaking discoveries, Indian work in each therapy area will be told in some unique formats. Clinical Pathological Conference, theme based symposia and Controversies in Clinical medicine will add the clinical favour of the day. Each day has special themes and special dedicated domain enlightening halls. Workshops and hands on training as well as didactic guest lectures will be delivered by domain experts from the globe. Young researchers will get a platform to present their work with attractive academic prizes.

Mumbai is one of the most densely populated cities in the world but still lacks a large international size convention centre, which soon will be possible in next couple of years. Therefore we decided to join two twin venues Hotel Renaissance Convention Centre and Hotel Ramada Convention Centre, near the Powai lake. Each of the convention centres will have academic centres and conference facilities and will be connected by shuttle service. Please carefully study, which scientific locale you want to attend and try to reach the venue early in the morning to avoid the bottle neck traffic congestion. We anticipate huge bottle neck traffic while entering the venue so come early and keep extra time and follow signage’s. All those attending the conference are requested to carefully study the scientific program and details of the hall. Based on the sessions, you can directly go to either Hotel Renaissance Convention Centre and Hotel Ramada Powai Convention Centre. The halls that are located in Hotel Renaissance Convention Centre are – Jivraj Mehta Hall (Grand Ball Room), KK Datey Hall (Terrace), and M Paul Anand Hall (Powai Ball Room). The other Halls that are located in Hotel Ramada Powai Convention Centre are - Shantilal Shah Hall (Crystal Ball Room - Ground Floor), CV Talwalkar Hall (Emerald Ball Room – 1st floor), RV Sathey Hall (Emerald IV – 1st floor), JC Patel Hall (Sapphire – 1st floor) and PJ Mehta Hall (Ground Floor).

I take this opportunity to thank my Guide and Mentor Dr. Siddharth N. Shah, the Organising Chairman of this meeting the true architect and overall incharge of this meeting. He has been guiding me at each stage and step of the meeting from conception to delivery. The scientific menu is fully planned by our beloved President - Elect, Dr. B.R. Bansode and Dean, ICP- Dr. A. Murugunathan. I would really place on record sincere thanks to my brother, President API - Dr. G.S. Wander, Mentor Dr. Y.P. Munjal, Secretary API - Dr. Mangesh Tiwaskar, Dr. Sandhya Kamath, Dr. Milind Nadkar, Dr. Pritam Gupta, Dr. Rajesh Upadhyay, Dr. Rohini Handa, Dr. Agam Vora, Dr. Banshi Saboo, Dr. B.B. Thakur and all the Governing body members, memebers of ICP and Physicians Research Foundation (PRF). I would like to thank Ms. Sunita Shukla & API Staff, Ms. Ruby Sound, Ms. Mamta Junghare & my Staff, Mrs. Malvika Trivedi and her staff for all their help and co-operation. I apologise if unintentionally or inadvertently any oversight occurs on behalf of the organisers which can happen at such a mammoth event. We all want you to cherish fond memories of APICON 2017. We hope you will join us for a symphony of outstanding science, and take a little extra time to enjoy the spectacular and unique charm of the happening city.
International Diabetes Summit - 2017, Pune

10th - 12th March, 2017
(Friday - Sunday)

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New methods of glucose control.
Diabetes & Technology: What’s New?
The future of bariatric therapies.
Diabetes in Pregnancy

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<th>Category</th>
<th>Registration Fee (Fee / Person in INR)</th>
<th>Spot</th>
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<tr>
<td>☐ National Delegate</td>
<td>Rs. 6,000/-</td>
<td>Rs. 7,000/-</td>
</tr>
<tr>
<td>☐ PG Student / ACRIDC / CMID course participants</td>
<td>Rs. 3,000/-</td>
<td>Rs. 3,500/-</td>
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<tr>
<td>☐ PNIH Delegates</td>
<td>Rs. 4,500/-</td>
<td>Rs. 5,250/-</td>
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<td>☐ NCP’s</td>
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<tr>
<td>☐ International Delegate</td>
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### Tentative Scientific Programme (APICON CME 2017)

#### Thursday, 26th January, 2017

<table>
<thead>
<tr>
<th>TIME</th>
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<tr>
<td><strong>SHANTILAL SHAH HALL (RAMADA) (CRYSTAL BALL ROOM) (GR. FLR.)</strong></td>
<td></td>
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</tbody>
</table>
| **08.30 am - 09.00 am** | **Rising Star Symposium**  
Chairpersons: DK Mazumdar & Amitava Biswas  
Mortality Predictors of ARDS in Medical Intensive Care Unit of a Tertiary Care Centre in a Tropical Country.  
Rakesh Bhadade, Mumbai  
Cardiac Manifestation in Dengue Fever  
Mohit Arora, Belgaum  
VP Singh, New Delhi | |
| **09.00 am - 09.30 am** | **Chairpersons: Amitava Mazumdar, Tanmoy Chatterjee**  
Panel Discussion on Tackling the Challenge of Antibiotic Resistance: Socio Political Perspective  
Moderators: Abdul Ghafur, Chennai, Rajesh Chawla | |
| **09.30 am - 10.30 am** | **Chairpersons: Vipin Mehra, Haridwar, KK Sawlani, Lucknow**  
Pathophysiological Basis of ACE, ARB & CCB Drugs  
Narasing Verma, Lucknow  
In Hospital Management of DM  
Jothydev Kesavadev, Trivandrum  
Liver Transplantation - Physician Perspective (Indications & Long-term Care)  
Mohammed Reja, Chennai | |
| **10.30 am - 11.30 am** | **Chairpersons: Ruby Bansal, Pankaj Choudhary**  
Practical Approach to a Diabetic Patient with Foot Ulcer  
Sadasiva Rao Yalamanchi, Vijayawada  
When Should I use Newer Insulin  
P. V. Rao, Hyderabad  
Practical approach to a person who complaints excessive sweating  
Basavanagowda, Mysore | |
| **11.30 am - 11.30 am** | **Chairpersons: Sujata Mazumdar, K. C. Lohani, UP**  
Practical Approach to Frequent Falls in the Elderly  
AR Vijayakumar, Coimbatore  
Practical Approach to Hiccups  
Kaushik Ghosh, Kolkata  
Suspecting and Managing a Pituitary Patient  
Avudaiappan S, Coimbatore | |
| **11.30 am - 11.50 am** | **Chairpersons: Kiran Soni, Mumbai, R K. Aran, Mumbai** | |
| **11.50 am - 12.10 pm** | **Chairpersons: Pankhuri Dutta, Mumbai**  
Practical Approach to Lymphadenopathy  
Niranjan N Rathod, Mumbai | |
| **SHANTILAL SHAH HALL (RAMADA) (CRYSTAL BALL ROOM) (GR. FLR.)** | **08.30 am - 09.00 am**  
Chairpersons: Manoj Mathur, Allahabad U & Bharat Bhushan Jindal  
What does number mean in medical practice  
Sudhir Bhandari, Jaipur  
Practical Approach to Edema Feet  
Kumar Natarajan, Coimbatore  
Practical approach to Chronic Diarrhea  
Sanjay Tandon, Lucknow | |
| **12.10 pm - 01.10 pm** | **Chairpersons: manoj mathur, Allahabad U. P. & Bharat Bhushan Jindal**  
What does number mean in medical practice  
Sudhir Bhandari, Jaipur  
Practical Approach to Edema Feet  
Kumar Natarajan, Coimbatore  
Practical approach to Chronic Diarrhea  
Sanjay Tandon, Lucknow | |
| **01.00 pm - 02.00 pm** | **Chairpersons: Indranil Haldar, DP Chakraborty**  
Practical approach to peripheral Neuropathy  
Rajasekaran, Trichy  
Practical Approach to a Patient with Tremors  
A V. Srinivasan, Chennai  
Practical Approach to a Person who is Unconscious  
Nagarajan Venkatraman, Madurai | |
| **02.00 pm - 03.00 pm** | **Case Presentation** | |
| **03.00 pm - 04.00 pm** | **MCQs** | |
| **JIVRAJ MEHTA HALL (RENAISSANCE) (GRAND BALL ROOM)** | **08.30 am - 09.30 am**  
Chairpersons: Indranil Haldar, DP Chakraborty  
Practical Approach to Peripheral Neuropathy  
Rajasekaran, Trichy  
Practical Approach to a Patient with Tremors  
A V. Srinivasan, Chennai  
Practical Approach to a Person who is Unconscious  
Nagarajan Venkatraman, Madurai | |
| **09.30 am - 10.00 am** | **Chairpersons: Pritam Gupta, New Delhi, Rohini Handa**  
Rabindranath Tagore Oration: Bad Bugs and No Drugs the Saga of Antibiotic Resistance  
Sandeept Puri | |
| **10.00 am - 11.00 am** | **Inauguration of CME Scientific Programme by**  
Chairpersons: Siddharth N. Shah, YP Munjal, Shashank R Joshi  
Dean’s Oration: Hypertension in India: The Way Forward  
A Muruganathan, Tirupur | |
| **11.00 am - 11.30 am** | **Chairpersons: NR Rao, J.K.L. Das, Patna, Chandni, Kerala**  
Chlorothalidone for Hypertension story retold  
Venkat S Ram, Hyderabad, Brain Pinto | |
| **11.30 am - 11.50 am** | **BP Variability: The next big thing in Hypertension Management?**  
Tinny Nair, Kerala | |
| **11.50 am - 12.10 pm** | **BP Variability: Is there a need of a new CCB: In this era of Amlodipine?**  
Anjan Lal Dutta | |
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<tr>
<th>TIME</th>
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<tr>
<td><strong>JIVRAJ MEHTA HALL (RENAISSANCE) (GRAND BALL ROOM)</strong></td>
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<tr>
<td>10.00 am - 11.00 am</td>
<td>Dengue</td>
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<td>12.15 pm - 12.40 pm</td>
<td>Chairpersons: V Ramasubramanian, Chennai</td>
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<tr>
<td>12.40 pm - 01.05 pm</td>
<td>Dengue – A Notorious Virus</td>
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<td>S. Subramanian, Chennai</td>
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<td>01.05 pm - 01.15 pm</td>
<td>Q &amp; A</td>
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<td>01.15 pm - 2.35 pm</td>
<td>Chairpersons: Atul Mehrotra, Lucknow, Peter George, Mangalore, Ananda Bagchi</td>
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<td>Adult Influenza Vaccination</td>
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<td>BA Muruganathan, Tirupur</td>
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<td>SGLT2i- CVOT in Progress</td>
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<td>Binayak Sinha, Kolkata</td>
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<td>Guidelines on Initiation and Intensification of Insulin Therapy with Premixed Insulins (2016 Update)</td>
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<td>Sanjay Kalra, Kamal</td>
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<td>Mangesh Tiwaskar, Mumbai</td>
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<td>02.40 pm - 04.00 pm</td>
<td>Chairpersons: BNM Prasad, New Delhi, Subhash Giri, New Delhi, Rajender K. Bansal, Ludhiana</td>
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<td>Practical Approach to Anemia</td>
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<td>M. B. Agarwal, Mumbai</td>
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<td>Nephroprotection Beyond ACE Inhibitors and ARBs</td>
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<td>Umesh Khanna, Mumbai</td>
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<td>Importance of Pneumococcal Vaccination in Chronic Disease Conditions</td>
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<td>Sujee Rajan, Mumbai</td>
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<td>Practical Approach to Hemiplegia</td>
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<td>Subhash Kaul, Chandigarh</td>
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<td><strong>K.K. DATEY HALL (RENAISSANCE) (TERRACE)</strong></td>
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<td>08.30 am - 09.30 am</td>
<td>Chairpersons: Ravi K, Bangalore, Nagaraja BS, Karnataka</td>
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<td>What Should I Do for a Person with Urine Report</td>
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<td>Showing Microalbuminuria</td>
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<td>Ravi Keerthy, Bangalore</td>
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<td>Practical Approach to Leukocytosis</td>
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<td>Madhuchanda Kar, Kolkata</td>
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<td>Practical approach to a person with abnormal TSH level</td>
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<td>Suresh Damodharan, Coimbatore</td>
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<td>09.30 am - 10.00 am</td>
<td>Panel Discussion: Poison Management</td>
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<td>Organo Phosphorus – Poison Management</td>
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<td>Lokeshwar Singh, Manipur</td>
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<td>Snake Bite – Management</td>
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<td>Joseph K Joseph, Ernakulam</td>
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<td>Practical Approach to the patient with Unknown Poison</td>
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<td>RR Singh, Jhansi, UP</td>
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<td>Moderators: Vinay Rampal, Jammu &amp; Kashmir</td>
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<td>10.00 am - 11.00 am</td>
<td>Chairpersons: Siddharth N Shah, YP Munjal, Shashank R. Joshi</td>
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<td>Dean's Oration: Hypertension in India: The Way Forward</td>
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<td><strong>K.K. DATEY HALL (RENAISSANCE) (TERRACE)</strong></td>
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<td>11.00 am - 12.00 pm</td>
<td>Chairpersons: Krishna Kumar, Patna, Shyam Narayan Prasad, Bihar</td>
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<td>Glycemic challenges in hospitalized patients: What’s crucial for the perioperative &amp; operative patients</td>
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<td>Mangesh Tiwaskar, Mumbai</td>
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<td>Once weekly GLP1 RA: where does the puzzle piece fit in the management of T2DM</td>
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<td>Manoj Chawla</td>
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<td>Latest CCB with superior organ protection</td>
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<td>12.00 pm - 12.20 pm</td>
<td>Chairpersons: Rajasekar, Kumbakonam, Tapas Banerjee</td>
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<td>Diagnostics – Distruptions</td>
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<td>12.20 pm - 12.40 pm</td>
<td>Velumani, Mumbai</td>
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<td>Are all BGM readings really reliable ? Bureau of Indian standards adopts revised ISO accuracy standards</td>
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<td>Ritu Johari, Mumbai</td>
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<td>12.40 pm - 01.40 pm</td>
<td>Chairpersons: PS Karmkar, Kolkata, SV Kulkarni, Mumbai</td>
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<td>Thyroid Disorders in Co Morbid Conditions</td>
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<td>Shashank R Joshi, Mumbai</td>
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<td>Managing Vertigo and restoring balance with stimulant that help natural compensation</td>
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<td>Achal Gulati</td>
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<td>Practical Approach to Intractable Cough</td>
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<td>Geetha, Coimbatore</td>
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<td>01.40 pm - 02.40 pm</td>
<td>Chairpersons: Sekhar Chakraborty, Kolkata, Girish Mathur, Kota</td>
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<td>Chronic medicine</td>
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<td>Anuj Maheshwari, Lucknow</td>
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<td>Prescribing Cascade in Elderly</td>
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<td>Shohael M Arafat, Bangladesh</td>
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<td>Practical Approach to a person with HBSAG positive</td>
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<td>Salimur Rahman, Bangladesh</td>
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<td>02.40 pm - 04.00 pm</td>
<td>Chairpersons: SN Narasingan, Chennai, M Chenniappan, Trichy, RR Choudhary, Patna</td>
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<td>Transcatheter Aortic Valve Implantation (TAVI or TaVR)</td>
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<td>Practical Approach to a patient with ECG Changes</td>
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<td>MS Hiremath, Pune</td>
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<td>Re Do CABG:- What, Why, When &amp; How</td>
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<td>S Bhattacharryya, Mumbai</td>
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<td>Diuretics in Primary Hypertension Reloaded</td>
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<td>Sundee Mishra, New Delhi</td>
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<td><strong>M PAUL ANAND HALL (RENAISSANCE) (POWAI BALL ROOM)</strong></td>
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<td>08.30 am - 09.30 am</td>
<td>Chairpersons: Mahalingappa B, Raichur, VK Goyal, New Delhi</td>
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<td></td>
<td>Common Medical Errors in Day to Day Practice</td>
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<td>KR Raveendra, Bangalore</td>
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<td>Practical Approach to a Person with Chest Pain</td>
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<td>Suresh Sagarad, Raichur</td>
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<td>Holistic Medical Education in Today’s World</td>
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<td>Ashutosh Ojha, Pune</td>
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### Inauguration of CME Scientific Programme

**Chairpersons:**
- Siddharth N Shah, Y. P. Munjal,
- Shashank R Joshi

**Dean's Oration:**
Hypertension in India: The Way Forward

**Moderator:**
Ketan K Mehta, Mumbai

### Panel Discussion: Practical Approach to Management of Hypertension in Co-Morbid Conditions

**Chairpersons:**
- Siddharth N Shah, Y. P. Munjal,
- Shashank R Joshi

**Dean's Oration:**
Hypertension in India: The Way Forward

**Moderator:**
Ketan K Mehta, Mumbai

### Time Table

#### M PAUL ANAND HALL (RENAISSANCE) (POWAI BALL ROOM)

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<td>09.30 am - 10.00 am</td>
<td>Panel Discussion: Practical Approach to Management of Hypertension in Co-Morbid Conditions</td>
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</table>
| 10.00 am - 11.00 am | Inauguration of CME Scientific Programme by Chairpersons: Siddharth N Shah, Y. P. Munjal, Shashank R Joshi  
  **Dean's Oration:** Hypertension in India: The Way Forward  
  **Moderator:** Ketan K Mehta, Mumbai |
| 11.00 am - 12.00 pm | Chairpersons: Gandharba Ray, Cuttack, Jyotirmoy Pal, Kolkata  
  Practical Approach to a person with Constipation  
  Sabyasachi Ray, Kolkata  
  Clinical Examination - The forgotten Art  
  Colin Robertson, Edinburgh  
  Approach to a patient with prolonged pyrexia/PUO suspected to have tuberculosis  
  Jilil Choudhury, Bangladesh |
| 12.00 pm - 12.30 pm | Chairpersons: Anuj Maheshwari, Lucknow, Apurba Kr Mukherjee  
  Interpretation of AGP to Improve the Diabetic Care  
  Mohan, Chennai |
| 12.20 pm - 12.30 pm | Case Study  
  Vishal Kastiwar |
| 12.30 pm - 12.50 pm | Chairpersons: Sunil Gutpa, Nagpur, Jayanta Chakraborty, Udhas Ghosh  
  Diabetes: Is there a light at the end of the tunnel?  
  Sadikot SM, Mumbai |
| 12.50 pm - 01.10 pm | Practical Approach to a Patient whose first time random blood sugar is 208 mg  
  SV Madhu, New Delhi |
| 01.10 pm - 01.30 pm | Sleep as Prescription  
  Anil Bhoraskar, Mumbai |
| 01.30 pm - 01.50 pm | Chairpersons: GS Wander, V Sundaravel  
  Maternal Medicine - a pragmatic approach for the South Asian physician  
  Chandrika, Sri Lanka |
| 01.50 pm - 02.10 pm | Gynecological malignancies: Prevalence, early diagnosis and preventive strategies - Physician's perspective  
  Jayanta Chatterjee, London |
| 02.10 pm - 03.10 pm | Chairpersons: Kalol Bhattacharjee, Silchar, BN Mahanta, Assam, Sankha Sen, Kolkata  
  Practical Approach to the patient with loss of Appetite  
  Dwijen Das, Silchar  
  Perioperative Management of Hypertension  
  Giridhar Kar, Silchar  
  Principles of Diet Therapy  
  Shilpa Joshi, Mumbai |
| 03.10 pm - 04.00 pm | Chairpersons: BR Bansode, Mumbai, Jayant K Panda  
  Approach to a patient with abnormal liver enzyme study  
  Frank Murray, Ireland  
  Use of spirometry in evaluation and management of airways obstruction  
  Geoffrey A Chadwick, Ireland |
| 08.30 am - 09.30 am | Chairpersons: Shivaraj Alashetty, Karnataka, Sangram Biradar, Gulbarga  
  Suspecting and Managing an Adrenal Patient  
  Sameer Aggarwal, Rohtak  
  Practical Approach to Haematuria  
  PP Varma, New Delhi  
  Contribution of India in Medical Sciences  
  Saikat Dutta, Darjeeling |
| 09.30 am - 10.30 am | Chairpersons: Anita Dutta, HS Pathak  
  Practical Approach to a person with Backache  
  PK Maheshwari, Agra  
  Practical Approach to Stress Related Disorders  
  NK Singh, Jharkhand  
  Practical Approach to Breathlessness  
  Alladi Mohan, Tirupati |
| 10.30 am - 11.30 am | Chairpersons: Prem Mittal, KD Sharma  
  Practical Approach to Giddiness  
  Sudha, Manipal  
  Practical Approach to Drug Induced Dysfunction  
  TK Suma, Alappuzha  
  Preoperative Management of the Patient with Diabetes  
  Sunil Gupta, Nagpur |
| 11.30 am - 11.50 am | Chairpersons: Gautam Bhandari, Jodhpur, Rajendra Chhabra  
  Alternate Medicine and Yogic Practices in Indian Scenario  
  Chandrasekhar V, Vijayawada |
| 11.50 am - 12.10 pm | Practical Approach to Loss of Weight  
  Ramanurmuty SV, Kakinada |
| 12.10 pm - 12.30 pm | Chairpersons: Anil Gomber, New Delhi, BB Rewari, New Delhi  
  Debate: Cord Blood  
  Useful  
  Meenakshi Bhattacharyya, Aurangabad  
  Not Useful  
  Bhattacharyya AK, Aurangabad |
| 12.30 pm - 01.30 pm | Chairpersons: GS Solanki, Paras Jain  
  Practical Approach to the patient with Palpitations  
  Palaniappan, Guzililamparai  
  Approach to Fever in a Returning Traveler  
  Bibhuti Saha, Kolkata  
  Practical Approach to Blood Vomiting  
  Jatinder Kumar Mokta, Shimala |
| 01.30 pm - 01.50 pm | Chairpersons: Prem Mittal, Narasimulu, Hyderabad  
  Ideal Cooking Oil in India  
  SS Laxmanan, Chennai |
| 01.50 pm - 02.10 pm | Practical Approach to the patient with Polyarthritis  
  Ved Chaturvedi, New Delhi |

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Green colour indicates Hotel Ramada**
Indian College of Physicians
REQUEST FOR PROPOSALS

(ICP Monographs)

The Indian College of Physicians invites proposals for Monographs to be published during 2017. The subject of proposed monograph should be of contemporary scientific interest. Proposals should include:

1. Tentative Topics to be covered
2. Proposed Authors
3. CV and publication list of the applicant

All proposals shall be placed before the Credentials Committee of ICP whose decision shall be final. The proposals may be sent to Honorary Secretary API/ICP at api.hdo@gmail.com with a copy to the Dean Elect Prof. Rohini Handa at deanicp2017@gmail.com

Last date for receiving such proposals is 20th January, 2017

Various Meetings during APICON 2017

Wednesday 25th January 2017
API, ICP And PRF Committee Meetings   Renaissance Mumbai Convention Centre Hotel - Powai, Mumbai

Thursday 26th January 2017
8.30 a.m. to 8.50 a.m. Inauguration of CME Programme Jivraj Mehta Hall (A) Renaissance – Grand Ball Room
4.00 p.m. to 5.00 p.m. 28th Annual General Body Meeting of I.C.P. K.K. Datey Hall (D) Renaissance Terrace
5.00 p.m. to 6.30 p.m. 72nd Annual General Body Meeting of A.P.I. K.K. Datey Hall (D) Renaissance Terrace
6.45 p.m. to 7.45 p.m. Inauguration of APICON 2017 Jivraj Mehta Hall (A) Renaissance – Grand Ball Room

Friday 27th January 2017
8.30 a.m. to 9.00 a.m. Inauguration of Scientific Program Jivraj Mehta Hall (A) Renaissance – Grand Ball Room
5.30 p.m. to 7.00 p.m. I. C. P. Convocation M. Paul Anand Hall (E) Renaissance Powai Ball Room

Saturday 28th January 2017
7.00 p.m. to 7.30 p.m. Second API General Body Meeting K.K. Datey Hall (D) Renaissance Terrace
7.30 p.m. to 8.00 p.m. Faculty Council Meeting ICP (New) K.K. Datey Hall (D) Renaissance Terrace
8.00 p.m. to 8.30 p.m. Governing Body Meeting API (New) K.K. Datey Hall (D) Renaissance Terrace

Sunday 29th January 2017
12.00 a.m. to 1.30 p.m. API Award Session Jivraj Mehta Hall (A) Renaissance – Grand Ball Room
1.30 p.m. to 2.00 p.m. Valedictory Function Jivraj Mehta Hall (A) Renaissance – Grand Ball Room

WORKSHOPS
Thursday, 26th January, 2017

TIME TOPIC
1 - RV SATHE HALL (RAMADA) (EMERALD IV) (1ST FLR.)
09.00 - 12.00 ECG - Arrhythmias unravelled
Chenniappan, Trichy
01.00 - 04.00 Research Methodology
RVSN Sarma, Tiruvallur, Shankar, Bangalore, Amitabh Sagar, Dehradun, TVSVGK Tilak

II - JC PATEL HALL (RAMADA) (SAPPHIRE) (1ST FLR.)
09.00 - 12.00 Bleeding Disorders
Sudhir Mehta, Jaipur, MB Agarwal, Mumbai, Pankhi Dutta, Mumbai
01.00 - 04.00 Pulmonary function test and sleep medicine
Agam Vora, Mumbai & team

III - PJ MEHTA HALL (RAMADA) (GR. FLR.)
09.00 am - 12.00 pm ABG Workshop
Rajesh Pande, New Delhi, Sumit Ray, New Delhi, Vivek Gupta, Ludhiana
01.00 pm - 04.00 pm ICU Management
Rajesh Pande, New Delhi, Sumit Ray, New Delhi, Vivek Gupta, Ludhiana

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**TENTATIVE SCIENTIFIC PROGRAMME (APICON 2017)**

**Theme: ‘BASICS TO BEDSIDE’**

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**TIME** | **TOPIC** | **TIME** | **TOPIC**
---|---|---|---
8.30 - 8.45 | Inauguration of Scientific Programme | 4.30-4.50 | Approach to Arthritis
8.45 - 9.00 | Dr. V Parameshvara - Life Time Achievement Award-2017 | 4.50-5.10 | Pulmonary-renal Syndrome
VR Joshi | Yojana Gokhale | 5.10-5.30 | The Future Of Systemic Lupus Erythematosus
9.00 - 9.30 | Personalised medicine making effective therapy safe for the individual patient | 5.30-5.50 | Does Modern Medicine Increase Life-expectancy: Quest for the Moon Rabbit?
RD Lele | Satyabrata Ganguly | | Sundee Mishra
9.30 - 10.00 | Netaji Oration – 2017: Physician: The Healer and The Professional | 10.30-11.30 | Spectrum of Coronary Artery Disease
SV Khadilkar | Ajit Mulusari | 10.30-10.50 | Noninvasive Testing for Diagnosis of Stable Coronary Artery Disease
10.00-10.30 | Presidential Oration | 10.50-11.10 | Management Strategies in Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS) in India
BV Bansode | Satyavan Sharma | 11.10-11.30 | Who should not undergo Primary PCI
11.00-11.30 | Meet the Master Teachers | 11.30-12.30 | Drug Dilemmas
11.30 - 12.30 | Meet the Masters | 12.10-12.30 | Combination Drug Therapy In Hypertension
11.30 - 11.50 | Drugs in Pregnancy | 12.30-12.50 | Hype about Hypertension
Mandish Dhanjal | A.U. Mahajan | 12.50-1.10 | Power to control Systolic Blood pressure—An Indian evidence
**JIVRAJ MEHTA HALL (RENAISSANCE) (GRAND BALL ROOM)**
8.30 - 8.45 | Inauguration of Scientific Programme | 10.30-11.30 | Spectrum of Coronary Artery Disease
8.45 - 9.00 | Dr. V Parameshvara - Life Time Achievement Award-2017 | 10.30-10.50 | Noninvasive Testing for Diagnosis of Stable Coronary Artery Disease
VR Joshi | Yojana Gokhale | 10.50-11.10 | Management Strategies in Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS) in India
9.00 - 9.30 | Personalised medicine making effective therapy safe for the individual patient | 11.10-11.30 | Who should not undergo Primary PCI
RD Lele | Satyavan Sharma | 11.30-12.30 | Drug Dilemmas
9.30 - 10.00 | Netaji Oration – 2017: Physician: The Healer and The Professional | 12.10-12.30 | Combination Drug Therapy In Hypertension
SV Khadilkar | A.U. Mahajan | 12.30-1.30 | Hype about Hypertension
10.30-11.30 | Meet the Master Teachers | 12.30-12.50 | Hypertension Urgencies & Emergencies
| Ajit Mulusari | Sekhar Chakraborty | 12.50-1.10 | Power to control Systolic Blood pressure—An Indian evidence
| Tiny Nair | 1.10-1.30 | Hypertension in Older Adults: What is Different…?
| Sandhya Kamath | 1.30 - 2.30 | Meet the Masters
| 1.30-1.50 | Management of Stable ischemic Heart Disease Current perspective | 1.30-1.50 | Management of Stable Ischemic Heart Disease Current Perspective
| D.B. Pahlajani | 1.50-2.10 | To assess predictive Value of Carotid artery intima Media Thickness as a Non-i nvasive Marker for Coronary and Cerebral Artery Disease
| GS Sainani | 2.10-2.30 | Management of dyslipidemia in India: what should be our approach in view of the differing guidelines
| Santanu Guha | 2.30-3.30 | Conundrums about CKD
| Santanu Guha | 2.30-2.50 | Clinical interpretation of urine analysis
| Vishwanath Billa | 2.50-3.10 | Chronic Kidney Disease Of Unknown Etiology
| Sudhir Kulkarni | 3.10-3.30 | Management Of Anemia In Chronic Kidney Disease: Revisited
| N.P. Singh | 3.30 - 4.30 | Renal Rescue
**SHANTILAL SHAH HALL (RAMADA) (CRYSTAL BALL ROOM) (GR. FLR.)**
10.30-11.30 | Spectrum of Coronary Artery Disease | 10.30-10.50 | Noninvasive Testing for Diagnosis of Stable Coronary Artery Disease
| Ajit Mulusari | 10.50-11.10 | Management Strategies in Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS) in India
| Satyavan Sharma | 11.10-11.30 | Who should not undergo Primary PCI
| Ashish Thakur | 11.30-12.30 | Drug Dilemmas
| Nihar Mehta | 11.30-11.50 | Anti-Platelet Therapy
| 12.10-12.30 | Combination Drug Therapy In Hypertension
| A.U. Mahajan | 12.30-1.30 | Hype about Hypertension
| 12.30-12.50 | Hypertension Urgencies & Emergencies
| Sekhar Chakraborty | 12.50-1.10 | Power to control Systolic Blood pressure—An Indian evidence
| Tiny Nair | 1.10-1.30 | Hypertension in Older Adults: What is Different…?
| Sandhya Kamath | 1.30 - 2.30 | Meet the Masters
| 1.30-1.50 | Management of Stable Ischemic Heart Disease Current Perspective
| D.B. Pahlajani | 1.50-2.10 | To assess predictive Value of Carotid artery intima Media Thickness as a Non-i nvasive Marker for Coronary and Cerebral Artery Disease
| GS Sainani | 2.10-2.30 | Management of dyslipidemia in India: what should be our approach in view of the differing guidelines
| Santanu Guha | 2.30-3.30 | Conundrums about CKD
| 2.30-2.50 | Clinical interpretation of urine analysis
| Vishwanath Billa | 2.50-3.10 | Chronic Kidney Disease Of Unknown Etiology
| Sudhir Kulkarni | 3.10-3.30 | Management Of Anemia In Chronic Kidney Disease: Revisited
| N.P. Singh | 3.30 - 4.30 | Renal Rescue
| 3.30-3.50 | AKI in ICU- Diagnosis and Management
| Georgi Abraham | 3.50-4.10 | Management of Acute Kidney Injury
| OP Kalra | 4.10-4.30 | Contrast Associated Acute Kidney Injury: Nephrologist’s Perspective
| Dinesh Khullar | 4.30-5.50 | Enemy on the Inside

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**TIME** | **TOPIC**
---|---
4.30 - 5.50 | Advancing into 2017
4.30-4.50 | Newer lipid guidelines - Interpretation and application for Indians
SN Narasingan
4.50-5.10 | Best Practices In Hypertension-2017
PC Manoria
5.10-5.30 | Role Of Angiotensin Converting Enzyme Inhibitors And Angiotensin II Receptor Blockers In Hypertension – 2017
Santosh Salagre
5.30 - 5.50 | Sudden Cardiac Death In Young People: Can It Be Prevented
Harendra Kumar

**C.V. TALWALKAR HALL (RAMADA) (EMERALD BALL ROOM) (1ST FLR.)**

10.30 - 11.30 | Meet the Masters
10.30 - 10.50 | Lipids and Diabetes
Vijay Panikar
10.50 - 11.10 | Technology in Diabetes
Banshi Saboo
11.10 - 11.30 | Unburdening The Burden Of Diabetes
V Seshiah
11.30 - 12.30 | Sugar Solutions 2017
11.30-11.50 | Gliclazide-A Sulfonylurea with a Difference
A.K. Singh
11.50-12.10 | Metformin Revisited 2017
Rajinder Singh Gupta
12.10-12.30 | Glitins in 2017
Shaila Shaikh

12.30-1.30 | Thyroid Troubles
12.30-12.50 | Subclinical Hypothyroidism
Manoj Chada
12.50-1.10 | Hypothyroidism beyond thyroid
Alaka Deshpande
1.10-1.30 | Subclinical hyper and hypo thyroidism—When to treat
Ankit Srivastav
1.30 - 2.30 | Enigmas in Endocrinology
1.30-1.50 | Panhypopituitarism
Minal Mohit
1.50-2.10 | Thyroid Diseases in Pregnancy
Padmavathy S Menon
2.10-2.30 | Management Of Autonomic Neuropathy In Diabetes
Rajasekar R.

2.30-3.30 | Preventive Diabetology
2.30-2.50 | Diabetes Mellitus: A CV Risk Equivalent
Kashinath Padhiar
2.50-3.10 | Prevention of Diabetes : Identify High Risk Individuals
Anupam Prakash
3.10-3.30 | Life Style Modification in Non Communicable Diseases
B.B. Thakur

3.30-4.30 | Combating Complications of Diabetes
3.30 - 3.50 | My Diet Plan for Diabetic and CKD
Sanjay Dash
3.50 - 4.10 | NAFLD and Diabetes
Lalit Kumar Meher
4.10 - 4.30 | Prevention And Management Of Diabetic Autonomic Neuropathy
A.K. Mukherjee

4.30 - 5.50 | The Road Less Traveled
4.30-4.50 | Doctor-Patient Relationship
Rajinder K. Bansal
4.50-5.10 | Democratizing Knowledge to Improve Care for the Under-served: Project ECHO
Sanjeev Arora
5.10-5.30 | Hygiene hypothesis and development of immunity
Bidyut Kumar Das
5.30-5.50 | A Review of Nutritional Factors in Hypertension Management
Ashok Taneja

**TIME** | **TOPIC**
---|---
10.30-11.30 | Movement Madness
10.30-10.50 | Management of Epilepsy in Special Situation
Gagandeeb Singh
10.50-11.10 | Approach To Hyperkinetic Movement Disorders
N Balamarugan
11.10-11.30 | Surgery for Parkinson’s disease and epilepsy
Paresh K. Doshi

11.30-12.30 | Respiratory Remedies
11.30-11.50 | Non Resolving Pneumonia
D P Singh
11.50-12.10 | Fungal infection in the Lung
Udas C. Ghosh

12.10-12.30 | Health Care Associated Pneumonias
Atul Bhasin

12.30-1.30 | Unanswered Questions in Gastroenterology
12.30-12.50 | Making a Positive Diagnosis of Irritable Bowel Syndrome
Vineet Ahuja
12.50-1.10 | Management of Ulcerative Colitis - Is it step-up or step-down?
Air Cnd Methakand Nandi VSM
1.10-1.30 | Long Term PPI Use : Is it Really Safe?
Ramesh Roop Rai

1.30-2.30 | Banking on Blood - Panel Discussion
Moderator : Mathew Thomas
Current Management of Hemophilia
S. Usha
Hemophilia - Prophylactic Therapy with Conventional and Newer Agents
T.K. Dutta
Artificial Blood: An Update On Current Red Cell And Platelet Substitutes
A.S. Mohan
Blood Component Therapy
Mathew Thomas
Newer Therapies in Haemophilia
Sandeep Garg

2.30-3.30 | Stiring the Neurons
2.30-2.50 | Tough Calls in Neurology
K. Mugundhan
2.50-3.10 | Heart Disease and Alternative Medicine
Ravikant Patil
3.10-3.30 | A Case based approach to Acute Flaccid Paralysis
Gp Capt Salil Gupta

3.30 - 4.30 | Out Live your Liver
3.30-3.50 | Diabetes Hepatopathy
Rajesh Upadhay
3.50-4.10 | NAFLD-Where Do We Stand Today
K.K. Lohani
4.10-4.30 | NASH: Do we really have an effective treatment?
Ajay Duseja

4.30 - 5.50 | Brain Teasers
4.30-4.50 | Approach Towards a Patient with Vertigo
Sanjiv Maheshwari
4.50-5.10 | Primary Headache Disorders - An Update
Anup Kr. Bhattacharya
5.10-5.30 | Managing Blood Pressure in Acute Stroke - A Dilemma
Bhupendra Chaudhary
5.30 - 5.50 | Doctor Patient Relationship
Brig. A P Mohanty, VSM

**M PAUL ANAND HALL (RENAISSANCE) (POWAI BALL ROOM)**

10.30-12.30 | Interactive Session on Venous Disorders
10.30-10.45 | Anatomy, Physiology & Classification of Varicose Veins
Jindal Ravul

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### Programme of Saturday, 28th January, 2017

#### TIME TOPI

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<tr>
<th>TIME</th>
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<tr>
<td>10.45-11.00</td>
<td>Incidence and prevalence of Venous disease in India</td>
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<td>11.00-11.15</td>
<td>Medical Treatment Of Varicose Veins</td>
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<td>11.15 - 11.30</td>
<td>Endovenous Ablation Therapy For Varicose Veins</td>
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<td>11.30 - 11.45</td>
<td>Over View of Management of Acute Deep Vein Thrombosis</td>
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<td>Catheter Directed Thrombolysis in Deep Vein Thrombosis (DVT)</td>
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<td>Pulmonary Embolism</td>
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<td>Recent Management of Lymphoedema</td>
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<td>12.30 - 1.00</td>
<td>Dr. G.S. Sainani Oration: Iron Deficiency in Heart Failure</td>
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<td>Medical Quiz</td>
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<td>2.00 - 2.20</td>
<td>Basics Of Prescribing Antimicrobial Drugs</td>
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<td>2.20 - 2.40</td>
<td>Infections in Elderly</td>
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<td>2.40 - 3.00</td>
<td>Pyrexia of Unknown Origin-Physician's Challenge</td>
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<td>Shocking Sepsis</td>
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<td>Approach to Sepsis</td>
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<td>3.20 - 3.40</td>
<td>Septic Shock- How Do I Manage?</td>
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<td>Sepsis- Old Wine in a New Bottle</td>
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<td>Interactive Session on Biosimilar Controversy - Debate on Biosimilar</td>
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<td>4.30 - 5.30</td>
<td>MCQ for PG Students</td>
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<td>ICP—Convocation for FICP</td>
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#### WORKSHOPS

- **R.V. SATHE HALL (RAMADA) (EMERALD IV) (1ST FLR.)**
  - **TIME** 10.00 - 6.00
  - **TOPIC** 2D Echo & Color Doppler
    - **Moderator:** Navin C. Nanda
    - **Faculty:** S.K. Parshar, C.K. Ponde, Nitin Burkule, Rohit Tondon, Rakesh Gupta

- **J.C. PATEL HALL (RAMADA) (SAPPHIRE) (1ST FLR.)**
  - **TIME** 10.00 - 12.00
  - **TOPIC** Valvular Heart Disease
    - **Moderator:** Ajit Desai
    - **Faculty:** Bharat Shivdasani, Satyavan Sharma, Prafulla Kelkar

- **TIME** 12.00 - 2.00
  - **TOPIC** Technology in Clinical Medicine
    - **Moderator:** S.V. Kulkarni
    - **Faculty:** Santosh Malpani, Alok Mody, Deepak Kulkarni, Ravindra R. Deshpande, Sagar Sinha, Navneet Wadhava, Vivek Redkar

- **TIME** 2.00 - 4.00
  - **TOPIC** Diabetic Foot
    - **Moderator:** Vijay Vishwanathan
    - **Faculty:** Vijay Mahajan, Benny Neglur, Ragini Maheswari, Dhakshata Padhaye

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<td>6.00 - 7.00</td>
<td>Potential Pandemics</td>
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<td>Clinical Presentation and Systemic Manifestations of Zika Virus</td>
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<td>Swine Flu</td>
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<td>Viral Haemorrhagic Fever</td>
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<td>SHANTILAL SHAH HALL (RAMADA) (CRYSTAL BALL ROOM) (GR. FLR.)</td>
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<tr>
<td>8.00 - 9.00</td>
<td>Free Papers</td>
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<td>9.00 - 10.00</td>
<td>Meet the Masters</td>
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<td>9.00 - 9.20</td>
<td>Five Recent Landmark Trials in Cardiology: How have they Changed our Practice</td>
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<td>V K Bahl</td>
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<td>9.20 - 9.40</td>
<td>Recent Developments In Intensive Cardiac Care For Acute Cardiac Disorders</td>
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<td>9.40 - 10.00</td>
<td>Some recent innovations in cardiology: how have they impacted our management strategies</td>
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<td>Samuel Mathew</td>
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<td>10.00 - 11.00</td>
<td>The Broken Heart</td>
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<td>10.00-10.20</td>
<td>Heart failure in Young and Elderly – Management Strategies</td>
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<td>Brian Pinto</td>
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<td>10.20-10.40</td>
<td>Recent Advances in Diagnosis, Management and Prognosis of diastolic heart failure</td>
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<td>Rakesh Gupta</td>
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<td>Rheumatic heart failure</td>
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<td>11.00 - 12.00</td>
<td>Acute Coronary Confusion</td>
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<td>11.00-11.20</td>
<td>Risk Stratification &amp; Management Algorithm for NSTEMI (NON STEMI)</td>
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<td>Lekha Pathak</td>
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<td>11.20-11.40</td>
<td>STEMI care in India and the real world: Role of Thrombolysis</td>
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<td>11.40-12.00</td>
<td>STEMI Pathway: From the Clinic to Cath Lab – a Continuum of Care</td>
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<td>Ashok Seth</td>
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<td>12.00 - 2.00</td>
<td>Pressure Points</td>
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<td>Ambulatory blood pressure monitoring</td>
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<td>Ashok Kirpalani</td>
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<td>12.20 - 12.40</td>
<td>Secondary Hypertension: An Age-Based Approach To Diagnosis</td>
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<td>Amit A. Saraf</td>
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<td>12.40 - 1.00</td>
<td>Difficult to Treat Hypertension</td>
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<td>R.K. Singal</td>
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<td>1.00 - 1.20</td>
<td>Renovascular Hypertension</td>
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<td>1.20 - 1.40</td>
<td>Hypertension In CKD- Management Issues</td>
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<td>Pritam Gupta</td>
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<td>1.40 - 2.00</td>
<td>What we learn from RCTs (randomized controlled trials) on HTN in 16</td>
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<td>Hemant Thakkar</td>
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<td>2.00 - 3.00</td>
<td>Prevention is Better Than Cure</td>
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<td>2.00 - 2.20</td>
<td>How to prevent and control the epidemic of coronary disease in Indians</td>
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<td>2.20 - 2.40</td>
<td>Microalbuminuria, A Risk Factor for CVD</td>
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<td>Management of Hypertension in CAD</td>
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<td>N.O. Bansal</td>
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<td>3.00 - 3.40</td>
<td>Advancing into 2017</td>
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<td>3.00 - 3.20</td>
<td>Hypertension Guidelines for 2017 – The Evidence so Far</td>
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<td>Uday M. Jadhav</td>
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<td>Lipid in 2017</td>
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<td>3.40 - 4.00</td>
<td>Sanofi Aventis Lectureship in Diabetes – 2017</td>
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<td>Sanjeev Pathak</td>
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<td>4.00 - 5.20</td>
<td>Rhythm Remedies</td>
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<td>4.00 - 4.20</td>
<td>Management of atrial fibrillation in Indian scenario</td>
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<td>4.20 - 4.40</td>
<td>Drug Induced QT Interval Prolongation and its Implications</td>
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<td>Yash Lokhandwala</td>
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<td>4.40 - 5.00</td>
<td>Ventricular Tachycardia: Causes, Diagnosis and Approach to Acute and Long Term Management</td>
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<td>Arun K. Chopra</td>
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<td>5.00 - 5.20</td>
<td>Cardiac Pacemakers: Indications, choices and follow up</td>
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<td>Hypertension Hype</td>
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<td>Alcohol And Hypertension Related Left Ventricular Systolic Dysfunction-Intergrated Approach Using Echocardiography</td>
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<td>Newer Beta Blocker in Hypertension</td>
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<td>Advance to Advance on - the 1st Evidence of Legacy Effect in the Management of Hypertensive Diabetic Patients</td>
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<td>Coagulation Cascade— What’s new</td>
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<td>Current Concepts in Venous Intervention</td>
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<td>8.00 - 9.00</td>
<td>Free Papers</td>
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<td>9.00 - 10.00</td>
<td>Basics to Bedside - Interactive session in clinical cardiology (1 Hours Session)</td>
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<td>Ruchit Shah</td>
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<td>Changing Concepts in Cardiology</td>
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<td>Cardiac Intervention</td>
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<td>Two- and Three- Dimensional Echocardiographic Assessment of the Aortic Valve</td>
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<td>TAVI Transcatheter Aortic Valve Implantation</td>
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<td>11.00 - 12.00</td>
<td>Diabetic Therapeutics</td>
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<td>Treating Diabetes—A Matter of Selectivity of Sulphonylureas</td>
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<td>11.20-11.40</td>
<td>Hydroxy Chloquine : A Therapeutic Choice in Diabetes Mellitus</td>
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<td>Novo Nordisk Lectureship: Clinical Impact of Newer insulins for the management of Type 2 Diabetes</td>
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<td>Approach to Brittle Diabetes</td>
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<td>Glycemic Control in ICU</td>
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<td>Insulin Pumps in India</td>
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<td>Pharmacotherapy of Obesity</td>
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<td>Exploiting the Gut to Treat Obesity</td>
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<td>2.00 - 3.00</td>
<td>The Heart of Pregnancy</td>
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<td>Current Status of Valvular Heart Diseases in Pregnancy Ajit Desai</td>
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<td>Peripartum Cardiomyopathy</td>
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<td>Pregnancy Puzzles</td>
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<td>Rational use of DMARDs in Pregnancy and Lactation R.N. Sarkar</td>
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<td>SLE and Pregnancy</td>
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<td>Acute Infections in Pregnancy</td>
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<td>Anaemia in Pregnancy</td>
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<td>Glycemic Load</td>
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<td>Glycemic Control - How Tight should it be</td>
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<td>AGI Glycemia and Beyond</td>
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<td>6.40 - 7.00</td>
<td>Empagliflozin : Potential Mechanisms of Cardiovascular Benefits Aparna Kansal</td>
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**K.K. DATEY HALL (RENAISSANCE) (TERRACE)**

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<td>Role of Vitamin K Antagonists in Deep Vein Thrombosis J.S. Hiremath</td>
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<td>The Confidence Registry Abstract: Oral Anticoagulation in Indian Patients with Thrombosis-Interim Data Mahesh Shah</td>
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<td>Are We losing the HeART in Hyperthyroidism</td>
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<td>An Evolving &amp; Evidence Based Concept in Treating Indian T2DM B. Makkar</td>
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<td>Pre Disease in Dyslipidemia and its Management: The Role of Dietary Supplements Piyush Jain</td>
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<td>Pneumonia-A Global Killer: Are we Updated?</td>
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<td>Control over Epilepsy: The rational choice</td>
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<td>Fatty Liver Disease and Metabolic Syndrome: Clinical Review of Practice Guidelines - An Indian Perspective VG Mohan Prasad</td>
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<td>Decoding the mystery of constipation: Simplifying the diagnosis and importance of defeating the 'Right' way in constipation management Rajesh Sainani</td>
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<td>Cross Talk-Choosing a ‘Right’ Prokinetic in Management of Dysmotility Disorder Chetan Bhatt / TK Banerjee</td>
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<td>'The Role of Assessment in Encouraging Bedside Clinical Skills</td>
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<td>UTI, AKI, Hepatorenal Syndrome, Bile Cast Nephropathy, how MHD Patients do in India</td>
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**WORKSHOPS**

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<td>CPC by Shibendu Ghosh</td>
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**WORKSHOPS**

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**Sunday, 29th January, 2017**

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<td>Medicine is a Serious Business?</td>
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<td>Air Ambulance Services—Transport of Critically Sick Patients</td>
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<td>Important Drug - Drug Interaction— must know for every physician</td>
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<td>Knowledge Management - Bringing About a New Era in Medicine</td>
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<td>Making the most of e-learning</td>
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<td>Training Opportunities in United Kingdom and Role of Royal Colleges</td>
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<td>11.40 - 1.30</td>
<td>Award Session (APICON - 2017)</td>
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<td>Dr. D.P. Basu Youg Scientist Award</td>
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<td>High Altitude Systemic Hypertension (HASH): A newer entity</td>
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<td>12.20 - 12.50</td>
<td>Dr. Vithalrao Nadgouda Best All India Annual Thesis Award</td>
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<td>Onwards Valedictory Function</td>
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**SHANTILAL SHAH HALL (RAMADA) (CRYSTAL BALL ROOM) (GR. FLR.)**

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<td>Pancytopenia: Clinical Approach</td>
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<td>Thrombolysis in stroke—experience in India</td>
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<td>Management tips of Epilepsy : A Physician’s perspective</td>
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<td>Advances in management of chronic pancreatitis</td>
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<td>Chronic Diarrhea-An approach</td>
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<td>Swaroop Kumar Baruah</td>
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Dr. J.C. Patel and Dr. B.C. Mehta Best Papers Award 2016

1st Prize for Best Original Article entitled “Hypomagnesemia in the ICU – Does Correction Matter?” - B Sheba Charles1, Indira Menon2, TS Girish3, AM Cherian4 - 1Post Graduate, 2Consultant and Head of the ICU, 3Consultant, 4Professor and Head of the Dept. of General Medicine, Bangalore Baptist Hospital, Bangalore, Karnataka - J Assoc Physicians India 2016;64(11):15-19.

2nd Prize for Best Original Article entitled “Infection Associated Secondary Hemophagocytic Lymphohistiocytosis in Sepsis Syndromes” - A Tip of an Iceberg” - Arun Agarwal1, Aakanksha Agarwal2 - 1Senior Consultant and Head, Department of Internal Medicine, Narayana Multispeciality Hospital, Jaipur, Rajasthan; 2Intern, BJ Medical College, Ahmedabad - J Assoc Physicians India 2016;64(10):44-50.

1st Prize for Best Case Report entitled “Primary Tuberculosis of Tongue” - Pradip Jain1, Pruthviraj Puwar2 - 1Consultant Chest Physician, 2Medicine Physician, Choithram Hospital and Research Centre, Indore, Madhya Pradesh - J Assoc Physicians India 2016;64(5):78-79.

2nd Prize for Best Case Report entitled “Osmotic Demyelination Syndrome Presenting with Chorea” - T Ravindran1, Paneerselvam2, Radha2, T Allowyn Yabesh3 - 1Professor, 2Assistant Professor, 3Post graduate, Dept. of Medicine, Kilpauk Medical College, Chennai, Tamil Nadu - J Assoc Physicians India 2016;64(4):89-90

1st Prize for Best Correspondence entitled “Diagnostic Dilemma of Tubercular Ascites, where we are” - Mridul Chaturvedi1, Sarvesh Kumar Prajapati2, Rosmy Jose2, Anjana Pandey3 - 1Professor, 2Junior Resident, 3Assistant Professor, P.G. Department of medicine, S.N. Medical College, Agra, Uttar Pradesh - J Assoc Physicians India 2016;64(8):105.

2nd Prize for Best Correspondence entitled “Tubercular Addison’ Disease- an Under Diagnosed Entity” - Jatinder Mokta1, Kiran Mokta2, Asha Ranjan3, Ivan Joshi4 - 1Professor, 2Associate Professor, 3Senior Resident, 4Junior Resident, Department of Medicine, IGMC, Shimla, Himachal Pradesh - J Assoc Physicians India 2016;64(9):101

The CME & Annual Conference 2016-17

Association of Physicians of India, Kerala Chapter is organizing “The CME & Annual Conference 2016-17”

Date: 25 & 26 February 2017 • Venue: “Hotel Haveli”, Punamada, Alappuzha

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For further details please contact: Dr. R. Chandni, Addl. Professor of Medicine, Government Medical College, Kozhikode. Ph: 9447202748 • Email: secapikerala@gmail.com • www.apikerala.org
ABSTRACTS : FREE PAPERS – PLATFORM PRESENTATION (APICON-2017)

Cardiology

Role of Ischemic Preconditioning in Preventing Contrast Induced Nephropathy: Nims Experience

P Siva Satya Subramanyam, O SaiSatish, LSR Krishna, D Seshagiri Rao, M Jyotsna
Nizams Institute of Medical Sciences, Hyderabad, Telangana

Background: Contrast-medium-induced acute kidney injury is associated with substantial morbidity and mortality. The underlying mechanism has been partially attributed to ischemic kidney injury. The aim of this randomized, double-blind, sham-controlled trial was to assess the impact of remote ischemic preconditioning on contrast-medium-induced acute kidney injury.

Methods: Patients with impaired renal function (serum creatinine >1.4 mg/dL and/or estimated glomerular filtration rate <60 mL/min/1.73 m²) undergoing elective coronary angiography were randomized in a 1:1 ratio to standard care with (n=50) or without ischemic preconditioning (n=50; intermittent arm ischemia through four cycles of 5-min inflation and 5-min deflation of a blood-pressure cuff). Overall, both study groups were at high risk to develop contrast-medium-induced acute kidney injury using Mehran risk score. The primary endpoint was the incidence of contrast-medium-induced kidney injury, defined as an increase of serum creatinine ≥25% and/or ≥0.5 mg/dL above baseline at 48 hours after contrast-medium exposure.

Results: Contrast-medium-induced acute kidney injury occurred in 26 patients (26%), 20 (40%) in the control group and 6 (12%) in the remote ischemic preconditioning group (OR 0.21; 95% CI 0.07-0.57; P=0.002). No major adverse events were related to remote ischemic preconditioning.

Conclusions: Remote ischemic preconditioning before contrast-medium use prevents contrast medium-induced acute kidney injury in high risk patients. Our findings merit a larger trial to establish remote ischemic preconditioning on clinical outcomes.

Prognostic Significance of the Distortion of Terminal Portion of QRS Complex and Fragmented QRS Complex on Admission ECG in STEMI

Jignesh Patel, Vijay Garg, RG Dhawale, Vaibhav Bandil, Mayank Gupta
RD Gardi Medical College, Ujjain, Madhya Pradesh

Background: Electrocardiogram on admission has been used in predicting prognosis and risk stratification in ST segment elevation acute myocardial infarction.

Objective: To analyze the admission ECG in STEMI based on abnormality observed in terminal portion of QRS complex i.e. (fragmented QRS & distortion of QRS complex) and its correlation to hospital mortality.

Method: Seventy patients were subjected for history, clinical examination and investigation. Group A – On the basis of the typical chest pain, ECG changes (without QRS distortion, despite of high degree of ST elevation, J points in leads emerge at ≥50% of the R wave amplitude in leads) cardiac enzymes, thirty three patients diagnosed as acute myocardial infarction were included in this group. Group B – QRS distortion (despite of high degree of ST elevation, J points in leads emerge at ≤50% of the R wave amplitude twenty six patients include in this group. Group C – fragmented QRS with ST elevation MI on ECG included eleven cases in this group.

Results: Out of seventy cases of Acute STEMI, there were nine deaths in our study, In Group A out of 33 cases, 1 (3.03%) death. In Group B out of 26 cases, 5 (19.23%) death. In Group C out of 11 cases 2 (18.18%) death. There was significant correlation of ACE and Mortality in Group A, Group B, Group C, (P<0.005). Distortion of terminal portion of QRS complex on admission ECG had higher mortality probably due to larger the infarct size which is assess by clinical assessment and evidence of left ventricular failure. ECG represents myocardial scar or inhomogeneous myocardial conduction or a marker of depolarization abnormality. It is also marker of poor prognosis in patients with acute MI. It is a predictor of ventricular arrhythmia event in patients with ischaemic cardiomyopathy.

Conclusion: ECG on admission is a simple, cheap, universally available investigation that can predict the short term prognosis in STEMI.

Outcomes following CABG surgery in Diabetics vs Non-Diabetics: A Prospective Analysis of 500 Patients

Suresh Chawla, BS Gupta, R Gupta, A Bana, S Lodha
Fortis Escorts Hospital, Jaipur

Introduction: There are limited prospective data on perioperative complications and outcomes in type-2 diabetes patients undergoing coronary artery bypass graft (CABG) surgery. We performed a prospective study on short-term outcomes in CABG patients with and without diabetes.

Material: We collected prospective data of consecutive patients who underwent CABG surgery from Jan 2015 to Dec 2015 (n=502). 49.2% (n=247) patients had type-2 diabetes. Details of demographic variables, disease severity, peri and post-operative complications (Intra Aortic Balloon Pump (IABP) support, cardio-pulmonary bypass pump support, inotropic support, prolonged ventilation, arrhythmias, major bleeding, mediastinal infections, renal failure, non-fatal infarction, stroke, mean ICU and hospital stay, and fatal outcomes), complications at one month follow-up, medications prescribed and total cost of treatment were obtained and compared with subjects without diabetes (n=255). Descriptive statistics are reported.

Observations: Among diabetics vs non-diabetics; mean age (61.6±8.4 vs 59.7±8.7 years), number of female patients (19.4% vs 12.6%), prevalence of obesity (BMI 26.0±3.9 vs 25.0±3.7), family history of diabetes (67.2% vs 20.4%) and hypertension (42.1% vs 32.9%) were greater in diabetics while there were no significant difference in prevalence of hyperlipidemia (75.3% vs 70.6%), COPD (44.1% vs 46.3%), left main disease (11.5% vs 16.5%), double vessel disease (13.4% vs 14.1%), triple vessel disease (85% vs 80.4%) and Ejection fraction (47.3% vs 47.9%). Diabetics had a lower prevalence of single vessel disease (1.6% vs 5.5%).

In diabetics there was greater requirement of IABP support (25.5% vs 7.8%, P<0.001), longer mean duration of ICU (4.3±1.8 vs 4.0±1.2 days) and average length of hospital stay (9.6±2.7 vs 8.9±2.0 days, P<0.001) however there was no significant difference in the requirement of cardiopulmonary bypass(3.6% vs 3.5%), intraoperative(82.2% vs 85.5%) and post-operative inotropic support (83% vs 85.5%), sepsis(0.8% vs 0.8%), mediastinitis (2% vs 0.4%), cardiac arrest(1.6% vs 1.9%), reimplanting of blood transfusion(85.4% vs 82.8%), post-operative renal failure (1.6% vs 0.4%), prolonged mechanical ventilation (24.3% vs 19.7%) or atrial fibrillation (1.6 % vs 2%).

At-discharge diabetics had statistically significant higher prescription of anti-coagulants (4.9% vs 1.2%, P<0.03) greater use of ACE inhibitors/ARB’s (P=0.05). The in-hospital prescription of anti-platelets was 100% in both the groups. There was no difference in the prescription of other drugs. At 30-day follow-up diabetics had lower use of beta blockers (96.4% vs 92.6%, P=0.06) and greater use of ACEi (67.3% vs 60.1%, P=0.09) there was no significant difference in the prescription of cardiovascular medications, except insulin.Theresults total direct economic cost of in-hospital treatment in diabetics was
significantly greater than in non-diabetics (diabetics INR 207,302 vs non-diabetics INR 178,242; p=0.001).

The in-hospital mortality in diabetics was 4 patients (1.62%) vs 3 patients (1.2%) in non-diabetics groups (p=n.s.). The combined in-hospital and 30-day mortality was slightly greater in diabetics (7 patients) vs 3 patients in non-diabetic group but was not significantly different (p=n.s.).

**Conclusions:** Type 2 diabetes patients undergoing CABS surgery have higher prevalence of obesity, higher requirement for IABP support, greater ICU stay, hospital stay and economic cost of in-hospital treatment. The incidence of complications is low and there is no significant mortality differences.

**Differentiation of Ischemic and Non-Ischemic LV Dysfunction - A New Scoring System**

**Pooja Banerjee, Partha Sarkar, Ajitava Dutta**

**Calcutta National Medical College**

**Introduction:** Dilated cardiomyopathy presenting with heart failure is a global epidemic with high prevalence in India. It has been divided into two main types ischemic and non ischemic. Differentiating ILVD from NILVD is important prognostically and therapeutically but might be difficult clinically. ILVD group (if they had a history of old myocardial infarction, percutaneous coronary intervention, coronary artery bypass graft surgery or at least one major epicardial coronary artery with > or = 70% stenosis and left ventricular ejection fraction (LVEF) < 50%); (2) NILVD group (if they had left ventricular dilation with global systolic dysfunction with LVEF < 50% and without a frank scar or aneurysm by echocardiography and absence of CAD).

**Materials and Methods:**
- **Inclusion Criteria:**
  - Age: 20-80years
  - Subjects presenting with dilated cardiomyopathy.
  - Patients consenting to undergo various investigations like electrocardiography, echocardiography and coronary angiography.

- **Exclusion Criteria:**
  - Age: <20yrs or >80 yrs.
  - Patients with valvular heart disease.
  - Patients with congenital heart disease.
  - Patients with restrictive and hypertrophic cardiomyopathy

**Results and Discussion:** Of the 114 patients, 79 patients (69.3%) had coronary artery disease (CAD) as evidenced by coronary angiography (ILVD). 35 patients (30.7%) had (NILVD). The mean age for ILVD group (57.4years) was significantly higher than the NILVD group (51.2years). Among 114 participants, 84 were males and 30 females. There was no significant difference among the prevalence of diabetes among the two groups but the prevalence of hypertension and dyslipidemia was significantly higher in the ILVD group. A history of angina or myocardial infarction should be sought for as the sensitivity and specificity was 82.28% and 88.57% respectively for detecting ILVD. Among the ECG parameters, presence of pathological q waves on either the inferior leads or anterior leads had a sensitivity of 88.6%, specificity of 80% and positive predictive value of 90.9% in detecting ischemic LV dysfunction as compared to a specificity of 100% and sensitivity of 50% in a study by Aghasaeidghi et al.

Finally a scoring system comprising of absence of angina/MI, Q waves, presence of 1 Goldberger’s criterion, RV6/R Max<2 and RV6/R3<3 each having 1 point; presence of 2 Goldberger’s criterion having 2 points and presence of Goldberger’s triad having 3 points with a maximum score of 7 was devised and a cut off value ≥4 was determined to be highly sensitive and specific for diagnosing Non Ischemic Left Ventricular Dysfunction. For diagnosing ILVD, presence of angina/MI, Q waves, presence of none or 1 Goldberger’s criterion, RV6/R Max<2 and RV6/R3<3 were allotted 1 point each with a maximum score of 5 and a cut off value ≥3 was found to be optimum for diagnosing Ischemic Left Ventricular Dysfunction with high accuracy among patients with dilated cardiomyopathy.

**Conclusion:**
- Goldberger’s triad is a very specific sign of dilated cardiomyopathy with left ventricular systolic dysfunction but has poor sensitivity.
- The number of criterion of the Goldberger’s triad present on ECG has a strong positive correlation with the left ventricular end diastolic dimension and negative correlation with the ejection fraction of patients with dilated cardiomyopathy.

The present study was able to formulate an effective noninvasive scoring system for differentiating ischemic and non ischemic left ventricular systolic dysfunction based on clinical parameters among the patients presenting with dilated cardiomyopathy. However, the findings should be validated prospectively in a larger cohort prior to use in the clinical diagnosis and treatment of patients of dilated left ventricle with systolic dysfunction.

**Hyponatremia as Prognostic Marker in Acute Myocardial Infarction and Correlation with Acute Type 1 CardioRenal Syndrome**

**Tanu Namdeo**, Pradeep Nigam, Manoj Indkurak. 1RMO, 2Associate Professor, Professor and Head, Department of Medicine, Shyam Shah Medical College and S.G.M.H., Rewa, Madhya Pradesh

**Introduction:** A person is likely to experience other cardiovascular events after myocardial infarction (MI) and the risk can be determined by understanding various predictors of mortality. Hyponatremia has been shown to be a predictor of cardiovascular mortality. Cardiorenal syndrome (CRS) frequently complicates acute decompensated heart failure (ADHF) and acute myocardial infarction (AMI). Hyponatremia, a surrogate marker of congestion, hemodilution and neurohormonal activation, could identify patient at risk for AKI(Acute Kidney Injury). This study was carried to find out the relationship between hyponatremia and prognosis in acute myocardial infarction and cardio renal syndrome.

**Material:** 250 random patients presenting with acute myocardial infarction admitted to SS Medical College and SGMH REWA between March 2015 to May 2016 were included in the study. Plasma sodium concentrations and serum creatinine levels were determined on admission and within 72 hours of admission. Hyponatremia is defined as sodium level less than 135mmol/L.
<135 mEq/L). Acute kidney injury is defined as increase in SCr by >0.3 mg/dl above baseline within 48 hours.

**Observations:** Hyponatremia was present on admission in 28 patients (11%) and hyponatremia was present within the first 72 hours of hospitalisation in 45 patients (18%). Mortality was 1% (2/191) in patients without hyponatremia, 32% in patients with hyponatremia on admission (9/28) and 49% (22/45) in patients who developed hyponatremia within 72 hours admission, so the correlation was found statistically significant (p < 0.0001). 54% of the patients suffered AKI who had hyponatremia on admission, while 67% of patients suffered AKI who had hyponatremia within 72 hours of admission. This was more in comparison to patient with normal sodium levels which was 14%. Thus showing more occurrence of AKI in patients with hyponatremia (p < 0.0001).

**Conclusion:** Hyponatremia in patients with acute myocardial infarction is an independent predictor of 30-day mortality and correlate well with the development of acute cardiorenal syndrome type 1.

### Study of Subclinical Thyroid Dysfunction in Heart Failure Patients

**Gurpreet Singh, Tejinder Sikri, Raman Sharma, Pashaura Singh, Sukhraj Kaur, Saurabh Agarwal**

**Govt Medical College, Amritsar, Punjab**

**Introduction:** On the basis of the known effects of thyroid hormone on the heart, it is reasonable to expect adverse cardiac effects in subclinical thyroid dysfunction. Subclinical thyroid disease has been associated with systolic and diastolic cardiac dysfunction, and small studies have shown that thyroid hormone replacement improved measurements of cardiac function in subjects with subclinical hypothyroidism.

**Material and Methods:** 200 patients of 45 to 75 yrs. age group of heart failure were studied. The detailed history, physical examination, routine blood investigations, lipid profile, RBS, electrolytes and ECG were done. Cases were given levothyroxine in subclinical hypothyroidism and carbimazole in the subclinical hyperthyroidism. Thyroid profile and 2D Echocardiography findings were noted at baseline, 3 months and 6 months and compared in both groups.

**Inclusion criteria:** All the patients presenting with heart failure between age group of 45 to 75 years.

**Exclusion criteria:**
1. Patients who are already diagnosed cases of hyperthyroidism and hypothyroidism.
2. Patients taking drugs like amiodarone, lithium, INF-α, radio-iodine, IL-2, tyrosine kinase inhibitors.
3. Patients on levothyroxine or on anti thyroid drugs.

**Observations:** Out of 200 heart failure patients, Male (57%) outnumbered females (43%) patients. Subclinical hypothyroidism was present in 24 (12%) of cases and subclinical hyperthyroidism was present in 3% cases. Overt hyperthyroidism was present in 16 (8%) whereas 6 (3%) cases were of overt hyperthyroidism. In cases of subclinical hypothyroidism group, the improvement in TSH, FT3, FT4, LVEF, Mitral A velocity was significant at 3 months and 6 months as compared to baseline. While in controls of subclinical hypothyroidism group there was progression of disease and worsening of cardiac functions. In cases of subclinical hyperthyroidism group, improvement in parameter like TSH, LVEF, and LVIDd was significant at 3 months and 6 months as compared to controls.

**Conclusions:** There was significant improvement in TSH, FT3, FT4, LVEF with 6 months treatment of levothyroxine in subclinical hypothyroidism. In subclinical hyperthyroidism after 6 months of treatment with carbimazole, there was significant improvement in TSH, LVEF and LVIDd though number of cases was less.

### Study of Arrhythmias during and within Six Hours of Thrombolysis in Patients of Myocardial Infarction

**Shradha Runwal, Shradha S Runwal, GA Suwade, MA Bhattacharya**

**Govt Medical College, Aurangabad, Maharashtra**

**Introduction:** Arrhythmia is one of the most common complication after myocardial infarction. It may be related to reperfusion-injury, dyselectrolytemia i.e. hypokalemia, hyperkalemia, hypomagnesium levels, etc. Reperfusion arrhythmia are an important noninvasive marker of successful recanalization of infarction related coronary artery. However they are also a sign of reperfusion injury and a finding which may limit the favourable effect of reperfusion. Reperfusion arrhythmia originates as a consequence of the complex of cellular and humoral reactions accompanying the opening of coronary artery. As the primary cause of their generation are considered the chemically defined substances that are produced and accumulated in myocardium during reperfusion. Prolong ischemia results in variety of cellular metabolic and ultrastructural changes. Ischemia results in decreased cellular oxidative phosphorylation leading into decreased ATP. Adenosine nucleotide catabolism during ischemia results in accumulation of hypoxanthine. Within endothelium ischemia promotes expression of proinflammatory gene products and bioactive agents while repressing other protective gene products. Thus ischemia induces a proinflammatory state that increases tissue vulnerability to further injury on reperfusion. The dark side of reperfusion is lethal myocyte injury, microvascular damage, myocardial stunning and reperfusion arrhythmia. The key role is ascribed to free oxygen radicals but of importance are also other substances such as calcium, thrombin, platelet activation factor, inositol triphosphate, angiotensin II and others. These chemical mediators of reperfusion arrhythmia operated as modulators of cellular electrophysiology causing the complex changes at the level of ion channels. It is supported in the genesis of automic and triggered activity due to after depolarizations. As a typical reperfusion arrhythmia is considered as an early, frequent and repetitive accelerated idioventricular rhythm. In this study, we will be studying the various arrhythmia resulting after thrombolyis in patients of myocardial infarction.

**Aim:** To study the course of ECG rhythm changes during and within six hours of thrombolysis in patients of acute myocardial infarction.

**Objective:** To analyse the prevalence of various arrhythmias within six hours of thrombolysis in patients of STEMI.

**Inclusion Criteria:** All patients presenting to intensive cardiac care unit of our tertiary care centre with acute STEMI within 2 years of study.

**Exclusion Criteria:** Patients with previous history of myocardial infarction, pericarditis, valvular heart disease, pacemaker device.

**Material and Methods:** Every 4th patient of acute onset STEMI presenting to our tertiary care centre thrombolysed with Inj. Streptokinase (15 lac U in 1 hour) was monitored for arrhythmias using Holter monitor during and within 6 hours of thrombolysis. A total of 200 patients were studied.

**Study:** It was a cross sectional study

**Statistical Analysis:** Statistical analysis was done using Chi Square test. P value <0.005 was considered statistically significant.

**Results:**

Arrhythmias were found in 84% (168/200) of patients of STEMI thrombolysed with Streptokinase.

Arrhythmias were most prevalent in inferior wall MI followed by anterior wall MI.

86% females and 83% males were found to have arrhythmias within 6 hours of thrombolysis.

Idioventricular rhythm was the most common arrhythmia with 71% (120/168) prevalence.

The second most common arrhythmia was monomorphic couplets.
No significant difference was observed in the types of arrhythmias found in different age groups.

Ventricular tachycardia was found in 12 cases, most commonly associated with anterior wall myocardial infarction.

Complete heart block was evident in 8 cases, most commonly associated with inferior wall myocardial infarction (11/17 cases).

Sinus bradycardia was more commonly associated with inferior wall myocardial infarction (6/8 cases, most commonly associated with inferior wall MI).

Idioventricular rhythm was observed more during 4 to 6 hours of thrombolysis while monomorphic and bimorphic couplets were seen commonly in first 3 hours of thrombolysis.

Conclusion: Idioventricular rhythm is the most common arrhythmia after thrombolysis in acute MI.

Arrhythmias are most commonly associated with inferior wall MI.

Critical Care

Does the Addition of RDW and Neutrophil Lymphocyte Ratio to Standard Prognostic ICU Scoring Systems will Improve its Significance?
The Taste of Old Wine in a New Bottle
Siva Raman, Manirami Kumhar
JLN Medical College, Ajmer

Introduction: Red cell distribution width (RDW) and circulating neutrophil and lymphocyte counts ratio (NLCR) are easily available to clinicians because it is routinely reported as part of complete blood count. Several studies have reported that RDW and NLCR is closely related to outcome in critically ill patients. The aim of this study was to investigate whether serial changes RDW and NLCR correlate with standard ICU scores (APACHE II and SOFA scores) and changes in the clinical course of sepsis and severe sepsis patients and whether these could be a ready reckoner predictor marker for the development of multi organ failure in those patients in emergency wards.

Material & Methods: It is a prospective observational study done on 50 adult patients of both sex, who fulfilled the inclusion criteria (age >18, presence of SIRS, identified source of infection and evidence of organ dysfunction, hypoperfusion or hypotension) and exclusion criteria (hematological disease, chemotherapy or glucocorticoids medications, stressful conditions as trauma, burn, surgical, malignant and pregnant patients) admitted in sepsis in JLN Medical college hospital under department of general medicine. They were divided into 2 groups depending on outcome, Survivors & non-survivors. APACHE II score, SOFA score, CRP, WBCs, Neutrophil count, Lymphocyte count and calculation of NLCR were done on admission and correlations between all these parameters and RDW and NLCR were done on admission and on the 3rd day of admission.

Observations: On comparing the biomarkers studied in both groups, it was found that the values of RDW and NLCR were significantly different between group I on admission and group II. The best diagnostic cut-off for RDW on admission was 15.7%: at that level, sensitivity and specificity were 88.6 and 73.4%, respectively. The best diagnostic cut-off for NLCR on admission was >5 and the sensitivity and specificity of NLCR in the present study were 88.0 and 75.0% respectively. Higher RDW and NLCR values were found in patients with higher APACHE II and SOFA scores. RDW, NLCR, APACHE II score, and the SOFA score were significantly higher in non-survivors in comparison with survivors (P = 0.011, P < 0.001, and P < 0.001, respectively).

Conclusion: RDW and NLCR are new promising and readily available cheap biomarker that can aid the diagnosis and prognosis of sepsis in emergency setup and they also aid prediction of outcome comparable with more complex clinical scores (APACHE II and SOFA).

Study of incidence and prognosis of hyponatremia in medical - surgical intensive care units
Avinash Gupta, Sudishh Sehra, Deven Juneja
Sri Balaji Action Institute, New Delhi

Introduction: Hyponatremia is a common electrolyte disturbance in critically ill patients. Hence, understanding its implications is important for their management. The objectives of this study were to find out the incidence of hyponatremia and assess its effects on outcome.

Settings and Design: A prospective, case-control study, observational study was conducted from March 2014 to November 2014, in medical and surgical intensive care units (ICUs).

Material: 506 consecutive patients were enrolled. Patients were divided into cases - sodium levels below 135 meq/L (hyponatremic group) and control - sodium levels between 135-145 meq/L (eunatremic group). Primary outcome was 30 days mortality and secondary outcome measures were duration of stay in ICU and hospital.

Observation: Incidence of hyponatremia was 42.8%. Patients in hyponatremic group had an increased mortality rate (23.6% vs 10.4%) (P < 0.005) and had a higher requirement of mechanical ventilator (P = 0.0005) and renal replacement therapy (P = 0.05). Hyponatremic patients also had a longer duration of stay in ICU (4.04± 3.29 vs 3.63± 3.27) (P = 0.164), longer duration of stay in hospital (7.69± 5.07 vs 6.91± 5.20) (P = 0.093).

Conclusions: Hyponatremia is a frequent finding in critically ill patients, and it is associated with higher morbidity and mortality. Hyponatremia is an independent risk factor in itself associated with poor prognosis.

A Study of Venous-Arterial PCO2 Difference as a Predictor of Outcomes in Tropical Infections in the ICU
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Introduction: Tropical infections are important causes of admission to the ICU and are associated with high morbidity and mortality. Decreased mixed venous oxygen saturation (SvO2) values or central venous oxygen saturation (ScvO2) values have been shown to predict poor prognosis in patients with septic shock. Central venous-to-arterial carbon dioxide difference (pCO2 difference) has been found useful in predicting outcome in various ICU settings. SOFA scores have been recently validated for sepsis and septic shock.

Materials: This was a single centre prospective non-interventional observational study in the Medical Intensive Care Unit of a Tertiary Care Referral Hospital in Western India conducted on 34 consecutive patients with tropical infections admitted to the MICU during a 6 month period from 1/2/2016 to 31/7/2016. ABG and VBG analysis was done as a standard protocol. The pCO2 values in the ABG and VBG were used to calculate pCO2 difference. ScvO2 was recorded from the VBG report obtained from central line. SOFA score was calculated at admission. Data obtained was statistically analyzed by appropriate tests using Graphpad software.

Observations: The mean age was 32.9±16 years (range 12-75). Male to female ratio was 19:15. The etiologies were dengue, malaria, leptospirosis and undifferentiated fevers in 10, 9, 8 and 6 patients respectively. One had typhoid. Of the 34 patients in the study, 22 (64.7%) patients survived and 12 (35.3%) expired. The mean pCO2 gap was found to be 3.6 ± 2.8 mmHg and the mean ScvO2 was 79.5 ± 10.3. The difference in the pCO2 gap between patients who survived and expired was not statistically significant (p = 0.6943, CI: 95% from -3.759 to 3.157). The difference between ScvO2 in patients with tropical infections who survived and expired was not significant (p = 0.3028 CI: 95% from -3.668 to 11.428) in this study. Mean SOFA score in those who survived (7.6±3.35) was significantly lower than in expired patients (13.55±1.98) (p=0.001, CI: 95% from -8.097 to -3.782).

Conclusion: This study did not find a significant difference between the outcomes in patients with a high pCO2 and normal pCO2 difference. The SOFA score on admission is useful to evaluate and prognosticate critically ill patients with...
tropical infections.

**Predictors of Mortality in Sepsis in a Rural Tertiary Hospital – A study of 300 Cases**
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**MVI Institute of Medical Sciences and Research Hospital**

**Introduction:** Sepsis is defined as a systemic inflammatory response caused by infection and recently redefined as life-threatening organ dysfunction caused by a deregulated host response to infection. Some of the factors influencing mortality are – APACHE II, modest degree of hyperglycaemia, individual organ system failures, presence of multi organ failure syndromes. Inflammatory markers such as C-reactive protein (CRP), lactate clearance, cardiac biomarkers such as Troponin, Procalcitonin predict mortality. The primary objective of the study is to determine the factors influencing prognosis among septic patients.

**Materials and Methods:** A Retrospective study of 300 sepsis patients admitted in ICU of MVMC&RH from Jan 2015 to June 2016. Prognosis was assessed by means of APACHE II score, S. Albumin, WBC, RBS levels, organ involvement and duration of stay among survival and non survival groups.

**Observations:** Of the 300 patients 138 (46%) survived and 162(54%) died. Mean APACHE II score among mortality group was 25±4, with S. Albumin 2.4±0.6, WBC 18100±7200, duration of ICU stay 6±2. Duration of Ventilation 1±Multi organ involvement(p<0.0001) were found to be statistically significant in comparison with survivor group. In the present study admission Blood sugars were not influencing the mortality. Lung was the commonest organ involved in Sepsis, in both the groups (p=0.0001) followed by kidney, liver and heart.

**Conclusion:** Admission S. Albumin level, APACHE II score, WBC count, longer duration of stay and multi organ involvement are some the factors influencing prognosis of sepsis.

**Red Cell Distribution Width as a Prognostic Marker in Severe Sepsis and Septic Shock**
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**RSRAMahal Medical College**

**Introduction:** Severe Sepsis and Septic shock are increasing in incidence and contributing significantly to mortality. The prediction of outcome for patients with sepsis may facilitate more aggressive interventions. Various biomarkers are being evaluated for early diagnosis of Sepsis. RDW is one of them which has been shown to predict mortality and morbidity of Sepsis. Hence, this study is being done to see the correlation between RDW and Sepsis.

**Materials:** A total of 162 patients – 81 survivors and 81 nonsurvivors of severe sepsis and septic shock fulfilling inclusion and exclusion criteria were taken. Baseline variables, laboratory parameters, complications, SOFA Scores were compared between the two groups.

**Observation:** Majority of patients - 73(45.06%) were in the age group of 61 – 80 years. Bronchopneumonia (36%), Urosepsis(26%) was the most common cause for sepsis. Mean RDW was 15.20±2.29 in nonsurvivors and 13.86±2.20 in survivors which was statistically significant (p<0.001). Mean SOFA Score was higher among nonsurvivors 10.39±2.99 when compared to 5.55±2.05 in survivors (p<0.001). There was statistically significant positive correlation between SOFA Score and RDW.

**Conclusion:** RDW is a simple and inexpensive test done as part of complete blood count in patients with sepsis. In developing countries like India, RDW levels measured on admission can be used as a prognostic marker in severe sepsis and septic shock.

**Study of Red Cell Distribution Width in Critically Ill Patients**
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**Introduction:** Red cell distribution width (RDW) is the quantitative measurement of variation of size of circulating RBCs and is routinely assessed in the differential diagnosis of anaemia. Few studies have evaluated RDW in critically ill patients. The objective of this study was to assess RDW in critically ill.

**Material:** RDW was measured on admission, RDW of 130 patients admitted in ICUs who were critically ill with APACHE 2 score more than 18 were compared with 130 patients in ICUs with APACHE 2 score less than 18 and 130 non critically ill patients admitted in wards. The clinical details were noted in a proforma.

**Observations:** The RDW values (mean±SD) of critically ill patients with APACHE 2 score >18 (15.21±2.23) was significantly higher (with ‘p’ value 0.05) when compared to those with APACHE 2 score <18 (14.55±2.33). The RDW values (mean±SD) of critically ill patients with APACHE 2 score >18 (15.21±2.23) was significantly higher (with ‘p’ value 0.0001) when compared to non critically ill patients in the wards (13.98±2.05). The RDW values (mean ± SD) of patients less than 40 years (13.85±1.96) was statistically significant (with ‘p’ value 0.001) when compared with those more than 40 years.(14.9±2.3)

**Conclusions:** RDW of critically ill patients admitted to ICUs was more when compared with non critically ill patients. Hence RDW can be considered as an indicator of severity of critical illnesses and could be used in day to day practice as a prognostic marker.

**Sepsis Registry in a Tertiary Care Hospital: A South-Indian Experience**
**Selva Saravanam Saminathan, Vidya Menon, Merlin M, Sabarish B Nair, Veena Menon**
**Amrita Institute of Medical Sciences**

“e-SEPSIS REGISTRY” that can capture relevant information on adult sepsis esp. community sepsis that facilitate targeted management /therapy.

**Methods:** Based on the Surviving Sepsis Guidelines a computer based real time sepsis registry was designed to collect data of all sepsis patients presenting to the ED. This registry included details on demographics, Pre-hospital care, Clinical information, Patient care details and tools to assess compliance to Surviving Sepsis Campaign guidelines. Data entry was done by the ICU Clinical Pharmacist. Database was aligned with our hospital information system. Data efficiency was guaranteed by performing data collection and entry on a daily basis on all working days. Frequent reviews of the data collection process, quality and completeness were done to optimize the registry. Weekly reviews of database management was done by team of ICU physician, nurse & pharmacist.

**Observations:** The registry yielded data pertaining to 500 sepsis patients over the period of 2 years. It is to be noted that 49.2% of the total sepsis patients were referred from other hospitals. The SOFA score on admission of the 65% of the cases were <9 while 19% had a SOFA score of 9-10 and 16% had a score more than 11. 51% had an average length of stay <7 days. The primary focus of infection were pneumonia (39%), UTI (38%) and skin and soft tissue infections (16%). 22% of the cases had concomitant bacteremia. Compliance with the 3hr bundle was present in 83% of the cases. Non-adherence to bundle is significantly associated with mortality. P=0.02.

**Conclusions:** The sepsis registry is proving to be a key data source for defining the burden of the disease in our community. 27% of the patients expired and outcomes were comparable to published literature on sepsis. Non-adherence to bundle is significantly associated with mortality (p=0.02). The registry establishes a database that can act as a reliable tool aimed at monitoring and improving diagnosis and treatment of sepsis. It also aids to explore areas of research including developing the biomarkers and proposing suggestions for public health decision makers.
A Review of Acute Poisoning cases admitted in the MICU of a tertiary care hospital

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Aims and Objectives: Acute poisoning is an important public health problem causing significant mortality throughout the world. This study is aimed at determining the proportion of different types of poisonings that require intensive care management, distribution in the form of age, sex and seasonal differences, and outcome in the form of mortality in different categories of poisoning; and also comparison with mortality in non-poisoning patients admitted in the MICU.

Materials and Methods: Cross sectional study from January to December 2015, conducted in the MICU of a tertiary care hospital in Mumbai. All patients above the age of 12 years with acute poisoning and envenomation admitted to the ICU were included. Data regarding age and sex distribution, number, ventilator requirement, dialysis requirement and mortality in different types of poisonings and in non poisoning group was collected.

Results: There were a total of 714 admissions in the MICU in the year 2015 of which 149 were acute poisoning cases (20.8%); of which there were 22 deaths (Mortality of 14.7%), which was significantly less compared to mortality among non poisoning group of patients (p < 0.001). Among poisoning patients, males were 98 (65.7%), and females were 51 (34.2%). Age distribution was - 12-19 yrs - 16.7%, 20-34 yrs - 44.9%, 35-49 yrs - 26.1%, 50-69 yrs -10.7%, 70 yrs and above - 1.3%. Organo-phosphorus compound (OPC) consumption was the most common type, followed by snake bite, followed by others including sedative/antipsychotic overdose, pyrethroid, methanol, aluminium phosphide etc. 49.6% of the total poisonings, and 52.8% of OPC consumption required ventilatory support. Two required hemodialysis. Self poisoning due to impulsive suicidal attempt was the commonest mode of poisoning.

Conclusion: Organophosphorous compound poisoning constitutes the most common form of acute poisoning admissions in the MICU, with a mortality rate of 15%, a pattern similar to statistics from other parts of the country, but different from the world statistics in which sedative/anti depressant/antipsychotic overdose is the most common. Poisoning is more common in younger patients and there is a need to address the cause at root level.

Study of Insulin Resistance in Multi Organ Dysfunction Syndrome Patients and its Relation with Severity and Outcome

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Introduction: Multi organ dysfunction syndrome (MODS) as name implies, is a syndrome, not a specific disease entity, manifested by organ dysfunction affecting >1 organ. MODS is a common cause of mortality and morbidity. This study was done to determine insulin resistance (IR), its relationship with severity and outcome, in patients with MODS.

Materials: An observational case control study was conducted with 75 cases who were diagnosed with MODS (without any prior history of impaired glucose tolerance or other endocrine disorders) and 75 healthy controls. Fasting insulin level (FIL) and fasting blood sugar (FBS) levels were taken and IR was calculated using Homeostatic model assessment (HOMA). IR was compared among the cases and controls and its association was assessed with the outcome of the patients.

Observations: IR among MODS cases was 34.7% (n=26) as compared to controls 12 % (n=9), p (<0.001). The mean FBS, FIL and HOMA IR levels in cases were higher (150.65 ±62.41, 4.122 ± 3.28 and 1.477 ± 1.28) as compared to controls (91.43 ± 25.67, 1.68 ± 1.35 and 0.418 ±0.47), p value<0.001 respectively. Among the cases with MODS there was 41.3% (n=75) mortality, compared to no mortality among the controls. The mean FBS, FIL and HOMA IR values were higher in non-survivors than survivors, with z score = 2.27, 5.94, 4.93 respectively (p <0.05).Among the non survivors 64.5%(n=31) had IR as compared to survivors 13.6%(n=44),p<0.001.Mortality was higher in ≥ 4 organ failure cases (60%) as compared to < 4 organ failure cases(32%). The mean HOMA IR value was found to increase with the increase in the number of organ systems involved (0.54,1.286,1.85 and 2.72 for 2,3,4and 5 organ involvement respectively).

Conclusion: IR was significantly higher in patients with MODS than controls and also among non survivors than survivors. The mean HOMA IR value increased with number of systems being involved. Studies have shown that preventing acute hyperglycemia with insulin therapy substantially improves the outcome in critically ill patients with MODS. Therefore, estimation of IR can be used as an objective tool, in patients with MODS to lessen the severity of MODS and to provide a better outcome with respect to mortality.

SOF A Score in Sepsis- Correlation with Procalcitonin Level Total Leucocyte Count and C-Reactive Protein

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Introduction: Sepsis and its complications are one of the leading causes of death in ICUs. Early detection of sepsis is essential to prevent the progression of organ dysfunction, which would increase the complications and mortality. Patients with systemic infection and organ dysfunction or shock are difficult to distinguish from patients with similar clinical findings and investigations, but without infection. The established markers of inflammation (leukocytes, CRP) may often be influenced by conditions other than infection.

Various studies have showed procalcitonin (PCT) as a more reliable diagnostic marker of bacterial infection than other markers. However factors like duration of sepsis or renal failure can decrease its reliability on isolated measurement. Serial measurements over time may overcome this limitation. Severity of organ dysfunction in sepsis has been evaluated by various scoring systems. The predominant score in current use is the Sequential Organ Failure Assessment (SOFA) score. Quick SOFA score (q SOFA) was introduced by the sepsis-3 group in February 2016.

This study was done to investigate the correlation between SOFA score, q SOFA score, PCT, C-Reactive Protein(CRP) and total leucocyte count(TLC) in patients with suspected/documented sepsis and to investigate their value in predicting the prognosis.

Aims and Objectives:
1. To investigate the correlation between SOFA score, q SOFA, PCT, CRP and TLC as a diagnostic and prognostic marker in sepsis.
2. To assess the role of q SOFA as a predictor of mortality and duration of hospital stay in patients with sepsis.

Materials and Methods:
Type of study: prospective observational study
Time period: March 2016 to August 2016
Sample population: 141 patients with suspected/documented sepsis admitted in general ward/ICU of RKSMP, Kolkata

Exclusion criteria: Patients with history of malignancy, trauma, recent surgery and patients known to have chronic kidney disease or end-stage renal disease were excluded from the study.

Methods: SOFA score, q SOFA, PCT, CRP and TLC were estimated on admission
we had undertaken this study to know whether pulmonary tuberculosis is still rampant in our country and to reduce the impact on society, early identification of the development or progression of diabetic nephropathy using appropriate screening and diagnostic tools is very important in order to provide timely and proper management. We aimed at evaluating the level of urine neutrophil gelatinase-associated lipocalin (NGAL) as a marker of tubulointerstitial damage in patients with type 2 DM in relation to the level of albuminuria and other parameters.

**Materials and Methods:** Ninety patients with type 2 DM were included in this study, and 25 healthy subjects served as controls. Patients with overt albuminuria (>300 mg/g creatinine) or inflammatory states were excluded. Urine NGAL, microalbuminuria, and urine albumin-creatinine ratio were measured in patients and controls as well as parameters. The relationship of uNGAL levels with diabetes duration, body mass index (BMI), serum lipids, HbA1c, and albuminuria was also evaluated.

**Results:** Urine NGAL was significantly higher in microalbuminuric in comparison with normoalbuminuric patients and controls, and correlated positively with urine albumin-creatinine ratio. A positive correlation was reported between urine NGAL and both Hemoglobin A1c and duration of DM.

**Conclusions:** The study showed that Urine NGAL level increased in the very early phase of T2 DM before microalbuminuria occurred. This finding may support the hypothesis of a "tubular phase" of diabetic disease preceding overt diabetic nephropathy, and hence, the use of urine NGAL measurement for early evaluation of renal involvement.

**A Study of Mucocutaneous Lesions in Type 2 Diabetes Mellitus**

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**Introduction:** To study the various mucocutaneous lesions in patients with type 2 diabetes mellitus and to compare the presence of mucocutaneous lesions with BMI, blood sugar levels, fasting lipid profile (FLP), duration of diabetes and microvascular complications like peripheral neuropathy, retinopathy, nephropathy of diabetes.

**Materials:** A total of 200 patients diagnosed with Type 2 DM after the age of 30 years on the basis of ADA criteria or who were taking treatment for diabetes were included in the study. All patients underwent evaluation for mucocutaneous lesions, microvascular complications, blood sugar levels, HbA1C and FLP. Histopathological examination of the lesions and microbiological investigations were carried out whenever necessary to confirm diagnosis.

**Observations:** 200 patients with Type 2 DM were studied of which 97 were found to have mucocutaneous changes associated with diabetes (group 1) and 103 patients had no mucocutaneous changes (group 2). A total of 136 mucocutaneous lesions were found in 97 patients, consisting of 68(50%) infections and 68(50%) non-infections. Among the infections (n=68), bacterial infections were most common (47%). 14 patients who had mucocutaneous lesions were newly diagnosed diabetics. The presence of mucocutaneous lesions were significantly associated with blood sugar levels, BMI and...
With those not having the condition.

Materials and Methods: This prospective study was carried out at Artemis Health Institute, Gurgaon. A total of 100 primigravida pregnant women (50 of them having PCOS and 50 without PCOS) were studied. All subjects in both the groups were subjected to Glucose challenge test (GCT) at 24-28 weeks of gestation. Those with a positive GCT were further subjected to an oral glucose tolerance test (OGTT) to confirm the diagnosis of GDM. Clinical data was compared between the two groups and statistically analyzed.

Results: Among 50 PCOS subjects, 22 (44%) were found to be having GDM on the basis of a positive OGTT, whereas in non PCOS group only two subjects (4%) were diagnosed as GDM. This difference is statistically highly significant (P<0.001). In PCOS group 34 (68%) subjects were either obese or overweight, whereas in other group only 4 (8%) were obese or overweight (p <0.05). The mean weight of those having PCOS was 61.2 kg as compared to 58.2 kg in controls (p < 0.05). The mean BMI in PCOS patients was 25.2 vs 22.21 in controls (p<0.05). Fasting plasma glucose was significantly higher in PCOS subjects 96.13 mg/dL compared to 90.60 mg/dL in other group (p<0.001). 54% of PCOS subjects had symptoms suggestive of androgen excess.

Conclusion: PCOS women carry an increased risk of GDM, the risk worsening with an increasing BMI. The probability of a PCOS subject progressing to GDM increases with increasing severity of androgenic symptoms.

To Study Prevalance of Gestational Diabetes in Diagnosed Polycystic Ovarian Syndrome

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Introduction: Polycystic ovarian syndrome (PCOS) is being increasingly encountered in reproductive age group population. Not infrequently it complicates pregnancy, as it is a prediabetic condition. Little data exists to compare the prevalence of gestational diabetes (GDM) in patients having PCOS, than those without it.

Aims and Objectives: To compare the prevalence of GDM in patients having PCOS with those not having the condition.

Materials and Methods: This prospective study was carried out at Artemis Health Institute, Gurgaon. A total of 100 primigravida pregnant women (50 of them having PCOS and 50 without PCOS) were studied. All subjects in both the groups were subjected to Glucose challenge test (GCT) at 24-28 weeks of gestation. Those with a positive GCT were further subjected to an oral glucose tolerance test (OGTT) to confirm the diagnosis of GDM. Clinical data was compared between the two groups and statistically analyzed.

Results: Among 50 PCOS subjects, 22 (44%) were found to be having GDM on the basis of a positive OGTT, whereas in non PCOS group only two subjects (4%) were diagnosed as GDM. This difference is statistically highly significant (P<0.001). In PCOS group 34 (68%) subjects were either obese or overweight, whereas in other group only 4 (8%) were obese or overweight (p <0.05). The mean weight of those having PCOS was 61.2 kg as compared to 58.2 kg in controls (p < 0.05). The mean BMI in PCOS patients was 25.2 vs 22.21 in controls (p<0.05). Fasting plasma glucose was significantly higher in PCOS subjects 96.13 mg/dL compared to 90.60 mg/dL in other group (p<0.001). 54% of PCOS subjects had symptoms suggestive of androgen excess.

Conclusion: PCOS women carry an increased risk of GDM, the risk worsening with an increasing BMI. The probability of a PCOS subject progressing to GDM increases with increasing severity of androgenic symptoms.

Anemia its presence and severity in type 2 DM and its relationship with micro and macro vascular complications

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Introduction: In India, most diabetic patients are not being evaluated for anemia until appearance of clinical features of renal involvement. The aim of this study was to compare the prevalence of anemia in diabetic patients without overt features of renal pathalogy with non-anemic in diabetic patients and to analyze the severity of anemia in relation to the complications of diabetes and its duration.

Material and Methods: It is a cross-sectional study in which 120 patients of
Diabetes Mellitus Type 2 was including attending Medical OPD of Mahatma Gandhi Hospital, Sitapur, Jaipur was included. Upon admission all patients underwent a comprehensive assessment of diabetes-related complications and risk factors. Appropriate statistical analysis was done to find out any association between anemia and diabetes and its complications.

**Results:** Of the total 120 diabetic subjects in the study, 80 were anemic (49 males and 31 females) and 40 non-anemic (26 males and 14 females). The results showed significant lowering of HbA1c level by 0.3% at 3 years of duration of diabetes. Neutropathy (73.75%), retinopathy (40%) and CVA (11.25%) and CAD (18.75%) were more prevalent in anemic group than non-anemic group. Incidence of Neutropathy and Retinopathy increases with increase in severity of anemia whereas microalbuminuria had reverse characteristic. CAD, PVD and CVA incidence were found maximum in the moderate anemia group. Severity of anemia increases the mortality risk in coronary artery disease (ischemia) as predicted by TIMI score.

**Conclusion:** These finding suggest that anemia is associated with both micro and macro vascular complications in Diabetes. Anemia should be considered for inclusion in routine management of Type 2 DM irrespective of BMI or waist hip ratio. These metabolic derangements can be prevented or delayed with healthy lifestyle practice which includes healthy dietary habits and regular physical exercise of 30 minutes at least 5 days a week.

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**A Study of Correlation of Fasting Insulin Level In Patients With Metabolic Syndrome**

**Introduction:** Metabolic syndrome is a cluster of metabolic abnormalities that confer increased risk of cardiovascular disease & DM. It is estimated that around a quarter of the world’s adult population have Metabolic Syndrome. High baseline fasting insulin levels are independent determinants for the future development of MS. Recognition of high fasting insulin levels and insulin resistance helps in early detection and treatment and reduces cardiovascular morbidity and mortality and development of overt diabetes.

**Materials:** 100 cases of metabolic syndrome with 100 age and sex matched controls were studied. Qualifying patients underwent detailed history, clinical examination, routine investigations and estimation of fasting insulin level. The insulin resistance was calculated according to the HOMA model as follows:

\[
\text{HOMA-IR} = \frac{\text{fasting plasma glucose (mg/dL)} \times \text{fasting plasma insulin (microlU/mL)}}{405}
\]

**Observations:** Females were more commonly affected than males, (M:F=56:44). Mean Total cholesterol/HDL ratio was 7.48±1.59 and mean Triglycerides/HDL ratio was 7.77±1.78, Mean Fasting insulin level-26.86±2.06 muci/ml and mean HOMA-IR-6.10±0.80 Both Total cholesterol/HDL ratio and Triglycerides/HDL ratio calculated and compared with Fasting insulin level and HOMA-IR, and it showed a statistically significant correlation with ‘p’ value of <0.001.

**Conclusion:** High baseline fasting insulin levels are independent determinants for the future development of Metabolic Syndrome. Recognition of high fasting insulin levels helps in early detection and treatment and reduces cardiovascular morbidity and mortality and development of overt diabetes. This study proved that both Total cholesterol/HDL ratio and Triglycerides/HDL ratio correlated with Fasting insulin level and HOMA-IR values and can be used as surrogate markers of insulin resistance.

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**Emergency Medicine**

**Point of Care Brain Natriuretic Peptide level in Differentiating between Cardiogenic and Non cardiogenic Acute Dyspnea**

**Introduction:** Objectives of this study were to evaluate the causes of acute dyspnea, to evaluate role of point of care of BNP in acute dyspnea and to determine cut off level of BNP to differentiate between cardiogenic and non cardiogenic causes of dyspnea.

**Methods:** This cross-sectional study was conducted on adult patients [≥18 years] presenting with acute dyspnea to Department of Medicine, S.S. Hospital, IMS, BHU, Varanasi between July 2015 to June 2016. Point of care BNP was done in all these patients and all of them were subjected to 2D echocardiography as gold standard. BNP was measured in pg/ml on Alera Triage-Cardio product insert kit. Cardiologist doing 2D ECHO was blinded of BNP results.

**Observations:** Total 238 patients were evaluated with median age of 47.8 [20 to 76] years. Most of the patients were males [n=133] 55.3%. Multivalvular disease with CHF was the most common [35.3%] diagnosis. Median BNP level in patients with cardiogenic dyspnea was 885 pg/ml and among those with non cardiogenic dyspnea was 106 pg/ml. Median value of serum creatinine was 1.5 mg/ml and 1.2 mg/ml in patients with non cardiogenic and cardiogenic cases respectively. ROC at BNP level of 415 pg/ml was generated. At confidence interval of 95% and p value of 0.001, area under curve was 0.995. Optimum cut off point for detection of cardiogenic dyspnea was 415 pg/ml with sensitivity and specificity of 98.7% and 95% respectively.

**Conclusion:** Multivalvular heart disease with CHF was the most common cause of acute dyspnea in ED. This study gives us a reliable cut off level of 415 pg/ml of BNP with sensitivity and specificity of 98.7% and 95% respectively to distinguish between cardiogenic vs non cardiogenic dyspnea.
Endocrinology

Clinical Study of Primary Hyperparathyroidism in Tertiary Care Hospital: A Prospective Study
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Introduction: Primary hyperparathyroidism (PHPT) results from the inappropriate overproduction of parathyroid (PTH) hormone from one or many parathyroid glands and presents with hypercalcemia. It is the third most common endocrine disorder affecting 0.3% of the general population. In the Western world, the presentation has evolved from symptomatic to asymptomatic in most patients. But in India, it is still symptomatic in presentation.

Materials: 21 consecutive patients visiting/admitting/referring to Department of Endocrinology in MS Ramaiah Teaching and Memorial Hospitals from January 2015 to September 2106 were prospectively studied. We analysed clinical presentation, laboratory findings and treatment outcomes.

Observations: The mean age of patients is 42.8yrs (range 16-73yr) with 12 being male and 9 female with a male to female ratio of 4:3. All the 21 patients were symptomatic. Mean duration of symptoms is 5.14 yrs (range 1-10 yrs). Bone pains and muscular involvement were the most common complaints noted in 15 patients (71.42%) followed by renal stones seen in 14 patients (66.66%). 5 patients (23.8%) were wheelchair bound, 4 patients (19.04%) had pathological fractures. One patient had familial etiology and rest of the cases were sporadic. Mean calcium level was 13.19 mg/dl (range 8.7-18.9 mg/dl). Mean PTH level was 849.4 pg/mL (range 45-2340 pg/mL). Bone mineral density was evaluated by T score in 10 patients and all the patients were osteoporotic with T score < 2.5 in spine, hip joint and forearm. Sestamibi scan was true positive in 20 patients (95.23%) and inconclusive in one patient. Out of 21 patients, 20 underwent surgery. Mean immediate postoperative PTH level was 210 pg/ml (10.5-983 pg/ml). Hungry bone syndrome was seen in 4 patients (19.04%). One patient required multiple surgeries owing to persistence of the disease. One patient had parathyroid carcinoma. Mean PTH levels at 3 months was 44.2 pg/mL. Recurrence was noted in one patient.

Conclusion: Though the clinical presentation in asymptomatic in western world, it is still symptomatic in our study with bones and stones being the common presentation respectively. Routine measurement of serum calcium would help in diagnosing PHPT at asymptomatic stage and thereby reducing morbidity.

Gastroenterology

A Correlative Study between Levels of Lipocalin with Severity of Liver Dysfunction and Parameters of Metabolic Syndrome in Non Alcoholic Fatty Liver Disease Patients
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1KGMU, 2CDRI

Epidemiological studies suggest prevalence of NAFLD in around 9-32% of general population in India with higher prevalence in those with overweight or obesity and those with diabetes or prediabetes. Lipocalin is an adipokine which is being found to be a marker of liver inflammation and injury.

Objective: To study the correlation of serum lipocalin levels with severity of liver dysfunction and parameters of metabolic syndrome in non alcoholic fatty liver disease patients.

Materials and Methods: A total of 70 cases were enrolled who were diagnosed with NAFLD and who fit in the criteria of metabolic syndrome and who were willing to participate in the study. Serum Lipocalin levels were measured by ELISA method.

Results: The lipocalin levels were significantly elevated in patients of NAFLD with wide range (1.05-275 ng/ml) when compared to age and sex matched normal healthy volunteers (40.85±6.44 ng/ml).

Conclusion: Serum lipocalin levels are significantly elevated in patients of NAFLD and its levels were quantitatively related to grade of the fatty liver. Hence the serum lipocalin can be considered as a marker for detecting liver dysfunction at earlier stages in NAFLD cases associated with metabolic syndrome. The early intervention in NAFLD cases may improve prognosis.

A Study of the Predictors of Six-Month Survival in 64 Patients with End Stage Liver Disease
Srinivasa Vishnuvardhan Yedula, K Indira Devi, P Sridevi
Andhra Medical College

Background: Scarce data available regarding the predictors of survival in patients with end stage liver disease (ESLD) especially in India.

Methods: Six-month follow up study of 64 adult patients with ESLD, who attended general medicine outpatient department in our tertiary care teaching hospital in Visakhapatnam, South India.

Results: During the period February 2014 and June 2015, 64 adult patients [mean age 54 ± 8 years; males 50(78.1%)] with ESLD were included in the study, out of which 18(28.12%) patients died. On univariate analysis, mean serum bilirubin in mg/dl (alive 4.5 ± 2 vs dead 6.4 ± 3; p=0.005), INR (alive 1.8± 0.6 vs dead 2.3 ± 0.9; p=0.042), eGFR in ml/min/1.73m2 (alive 67 ± 11 vs dead 53 ± 10; p=0.021), MELD score (alive 20.6 ± 5 vs dead 24.5 ± 7; p=0.006), serum sodium in mEq/L (alive 136 ± 6 vs dead 129 ± 7; p=0.001) and MELD-Na (alive 22 ± 4 vs dead 26.8 ± 5.2; p=0.001) were found to have significant influence on the outcome in patients with ESLD. On univariate and multivariate Cox regression analysis, the model score comprising serum bilirubin, INR, eGFR and serum sodium (C-static=0.816; χ²=104.7; p<0.001), MELD-Na (C-static=0.805; χ²=102.8; p<0.001), hyponatraemia (hazard ratio=2.49; C-static=0.68; χ²=96.5; p=0.001) and MELD score (hazard ratio=1.21; C-static=0.75; χ²=92.4; p=0.02) emerged as predictors of survival.

Conclusions: eGFR is a better predictor of survival than serum creatinine. The model score, MELD-Na score are better predictors of survival than MELD score alone in patients with ESLD.

The Utility of BISAP Score in Predicting Severity and Prognosis in Acute Pancreatitis
Suman Talukdar, Debabrata Goswami, Bikash Narayan Choudhury
Gauhati Medical College

Introduction: Acute pancreatitis includes a wide spectrum of disease from one with mild self-limiting symptoms to fulminating processes with multi organ failure and high mortality. Early assessment of severity has an important implication in management and timely intervention.

Materials and Methods: A hospital based observational study was done with 97 patients diagnosed with acute pancreatitis. BISAP score was calculated within 24 hours of presentation. APACHEII scores were also calculated.

Observations: Most of the patients in the present study had a BISAP score of 0 and 1, i.e 41.2% and 30.9% respectively. 15 patients (15.5%) had a BISAP score of 2. 12.3% of patients had a BISAP score ≥3 within 24 hr of presentation. The AUC (area under curve) in ROC (receiver operator characteristic) plot of BISAP in predicting pancreatic necrosis was 0.951 (95% CI 0.897-0.998) and that of APACHE II score was 0.857 (95% CI 0.769-0.945). The AUC of BISAP in predicting severe acute pancreatitis was 0.970 (95% CI 0.944-0.996), and that of APACHE II score was 0.878 (95% CI 0.808-0.948). The AUC of BISAP in predicting organ Failure was 0.906 (95% CI 0.850-0.961) and that of APACHE II score was 0.900 (95% CI 0.823-0.977). The AUC of BISAP in predicting mortality was 0.994 (95% CI 0.990-0.998), and that of APACHE II score was 0.846 (95% CI 0.728-0.964). In
evaluating the significance of a higher BISAP score, i.e. ≥ 3 in predicting higher incidence of severity, mortality, pancreatic necrosis and organ failure, the test value for p in all the parameters were <0.05 on statistical analysis.

Conclusion: The BISAP score was observed to be a reliable tool in the early stratification of patients according to severity and may be considered as accurate as the APACHEII score which is universally used for severity assessment.

Haematology

To Study the Clinical Profile and Etiological Spectrum of Patients with Splenomegaly in a Tertiary Care Centre of North India

Varun Yadav, PS Ghalaut, Sudhir Kr. Atri, Mohini, Naresh Gaur, Divya Sahni, Akhilesh, Nidhi Yadav
Pt BD Sharma, PGIMS, Rohtak

This cross sectional, observational study was performed in 170 adult patients with splenomegaly who reported to Department of Medicine, Pt. B. D. Sharma, PGIMS Rohtak from may 2014 to April 2015, over a period of 1 year. The patients were evaluated for their complete clinical profile & etiology of splenomegaly. Grading of splenomegaly was done by Hacket’s grading. Thorough relevant investigations were carried out. Most patients were below 45 years of age. Most common etiological category of splenomegaly was hematological (54.7%) followed by infectious (24.5%), infective (15.8%) and other (4.7%) causes. Most common splenomegaly patients belong to Hacket’s grade II (55%), followed by grade III (28%), grade I (13%) & grade IV (4%). Among hematological etiology chronic myeloid leukemia was most common cause (25.9%). Malaria was the commonest etiology among infectious causes. On clinical examination paller was present in 87% cases. 44% of patients had hepatomegaly, 26% of patients had icterus, lymphadenopathy was present in 13% patients. We compared the results of our study with other studies & concluded that clinical profile & etiological spectrum of splenomegaly varies from region to region.

Index Terms- splenomegaly, Hacket’s grading, chronic myeloid leukemia, portal hypertension.

Study of profile of young male patients of Polycythemia in a tertiary care centre

Ajay Kandpal, Rajan Kapoor, Tarun Verma, AP Dubey, Rajesh Chilaka
Army Hospital, RR Delhi

Objective: To study clinical, hematological and mutational profile of young male patients with established Polycythemia.

Design: Patients of Polycythemia were examined and evaluated for the probable causes and effects of the disease via a cross-sectional, observational study.

Setting: All measurements were done at Army Hospital (R&R), Delhi Cantt.

Participants: Sixty young male patients (below 50 years) were included in this study which was conducted in a tertiary care hospital, Army Hospital (R&R), Delhi Cantt, at The Department of Clinical Hematology & Stem Cell Transplant Centre.

All male patients below 50 years fulfilling the diagnostic criteria of polycythemia by WHO(Hb >16.5 or Hct >49%) were subjected to detailed history and clinical examination. Further evaluation included complete hemogram, biochemical tests, and detailed work up for secondary polycythemia which included pulmonary function tests (PFT), serum erythropoietin (EPO) levels, arterial blood gas (ABG) analysis, 2Dimensional Echo cardiography, JAK 2 mutation and bone marrow studies

Patients were divided into two groups of primary polycythemia vera (as per WHO 2016 criteria) and secondary polycythemia

Results: Our study found 17% patients to be living in high altitude area, 25% patients had some exposure to high altitude area,14% patients were smoker, 26% had JAK 2v167f mutation present, phlebotomy was required in 30 % of patient. 8% patient had thrombosis related complications.

Conclusions: High altitude is an established risk factor for developing polycythemia and this study uncovers mutational basis for the same. Those patients with mutational changes require regular phlebotomy and have more risk for thrombosis related complications. Patients with HAA induce polycythemia were found to have low EPO levels. Thrombosis related complications are more in polycythemia vera and hence warrants aggressive approach in management.

To Study the Clinico Haematological Spectrum of Pancytopenia

Nidhi Yadav, PS Ghalaut, Sudhir Atri, Mohini, Naresh Gaur, Varun Yadav, Pawan Goel, Anuj Chaudhary, Dheeraj Kumar
Pt BD Sharma, PGIMS, Rohtak

The present prospective cross sectional study was conducted at Pt. B.D.Sharma PGIMS Rohtak, Haryana on 100 patients of pancytopenia of age group 14-65 consisting of OPD and admitted in hematology and medicine ward over a period of 1 year. The patients were properly evaluated for their complete clinical profile & etiology of pancytopenia. Pancytopenia was diagnosed in the presence of hemoglobin <12gm/dl, total leucocyte count (TLC) <4000/microL, platelet count <1,00,000/microL. Thorough relevant investigations were carried out. Most patients belong to young age group with mean age 42.87±15.54 years. Most common etiology of pancytopenia was megaloblastic anemia (39%) followed by Aplastic anemia (29%), Aplastic leukemia (15%) and other causes. Among megaloblastic anemia Pure vitamin B12 deficiency was observed in 27 cases. On clinical examination pallor was present in 100% cases. 31% of patients had hepatomegaly, 27% of patients had splenomegaly. We compared the results of
our study with other studies & concluded that clinicaco-hematological spectrum of pancytopenia varies from region to region.

### Study of Possible Correlation between ABO Blood Group and Various Surgical Malignancies

Awadhesh Narayan
IMSS, BHU

**Introduction**: The ABO blood group is an easily accessible factor in the human genetic makeup. The function of ABO antigens are not known, but the susceptibility to a number of diseases have been linked with a person’s ABO phenotype.

Although the ABO antigens are regarded as RBC antigens, they are actually expressed on a wide variety of human tissues and are present on most endothelial and epithelial cells. ABO blood group genes are mapped at $q34.2$ region in which genetic alteration is common in many cancers.

Since the first report showing an association between blood group A and gastric cancer, numerous other reports have documented a relation between susceptibility to cancer and blood group. The present study is an attempt to correlate ABO blood group frequency with preponderance of various cancers in Purvanchal region (Eastern Uttar Pradesh and Western Bihar), so as to assess the utility of ABO blood group as a preclinical marker.

**Material and Methods**

- **Study design**: Observational, cross-sectional study
- **Study population**: Study was conducted on 600 histologically proven cases of surgical malignancies, 600 healthy adults voluntary blood donors.
- **ABO blood grouping**: Blood grouping was done by Slide Agglutination method.
- **Statistical Analysis**: Data was analyzed using SPSS software. Two proportions were compared using Z score.

\[
Z = \frac{(\hat{p}_1 - \hat{p}_2) - 0}{\sqrt{(1-\hat{p})(\hat{p}_1 + \hat{p}_2)}}
\]

We reject the null hypothesis $H$ if $Z \geq 1.96$ or $Z \leq -1.96$. Difference was taken to be significant if $P$ value was $\leq 0.05$.

**Observation**

- **Distribution of ABO Blood Group among Controls**: Out of 1200 healthy adults voluntary blood donors 248 were blood group A, 412 blood group B, 114 blood group AB and 426 blood group O. Thus blood group O (35.5%) was most prevalent blood group among control population followed by blood group B (34.3%), A (20.7%) and AB (9.5%).
- **Distribution of ABO Blood Group among cases**: When all cancers were taken together the highest frequency of surgical malignancies was found in blood group B (33.1%) followed by O (29.8%), A (27.3%) and AB (9.6%).

When it was compared with control population there was a significance difference between case and control population for blood group A (Z score of 3.10 and P value <0.05) and O (Z score -2.39, P value <0.05). While in control population blood group A and blood group O consisted of 20.7% and 35.5% respectively, it was 27.3% and 29.8% in case population.

When considering individual cancers, out of 8 surgical malignancies (gastric cancer, colorectal cancer, oral cancer, gall bladder cancer, pancreatic cancer, lung cancer, breast cancer and ovarian cancer) Blood Group A was significantly associated with Gastric cancer (Z score 2.68, P value <0.05), Lung cancer (Z score 2.0, P value <0.05) and Breast cancer (Z score 2.34, P value <0.05).

Increased incidence of ovarian cancer was found in blood group B (41.4%) as compared to control (34.3%), but this difference was not found to be significance (Z score 1.2 P value <0.05).

None of the other malignancies under consideration was significantly associated with any of the ABO blood groups.

**Conclusion**

- Blood group O is the most common blood group and AB is the least common blood group among control population. Blood Group A is significantly associated with Gastric cancer, Lung Cancer and Breast cancer when compared with control population.

### Hepatology

#### Correlation of Endoscopic Detection of Esophageal Varices with Non-Invasive Parameters in Cirrhosis of Liver

Prarthish Kumar, Giridhari Kar
Silchar Medical College

**Introduction**: Portal hypertension is one of the most common complications and important cause of death in cirrhosis of liver. Rupture and bleeding from esophageal varices accounts for 10–30% of all cases of gastrointestinal bleeding. Upper-gastrointestinal (UGI)-endoscopy, the gold standard for detecting varices has its own limitations and not widely available. Hence, there is a need to identify non-invasive predictors of esophageal varices.

**Methods & Methods**: This study was undertaken in the aim to determine non-invasive markers in predicting the presence of esophageal varices in cirrhosis liver with portal hypertension. 100 patients including 62 males and 38 females with mean age 50.14yrs diagnosed with cirrhosis liver were recruited and patients with gastrointestinal bleeding, portal vein thrombosis, hepatocellular carcinoma and causes of ascites other than cirrhosis of liver were excluded.

**Results**: Esophageal varices were detected in 69 patients and absent in 31 patients. Various laboratory and radiographic parameters were analysed using appropriate statistical methods to evaluate for any predictive value with the presence of esophageal varices detected by UGI-endoscopy. Portal vein >13mm ($r=0.595, p<0.00001$) and spleen diameter ≥12.4cm ($r=0.562, p<0.00001$) showed statistically significant positive correlation and platelet count <105,000 ($r=-0.599, p<0.00001$) and platelet count/ spleen diameter (PC/SD) ratio <993.38 ($r=-0.693, p<0.00001$) showed statistically significant negative correlation with the presence of esophageal varices.

**Conclusion**: Portal vein and splenic diameter, platelet count and PC/SD ratio may be used as non-invasive predictors of esophageal varices and thus early intervention can be done by giving prophylactic measures to prevent esophageal rupture and bleeding and hence mortality in patients with portal hypertension.
mean age 50.04±11.24 years were included in the study. Amongst causes of chronic liver disease were alcoholic liver disease 22 (30.6%), CLD due to hepatitis B 24 (33.3%) and chronic hepatitis C 26 (36.1%). Twenty one (29.2%) patients had normal BMD while 51 (70.8%) had a low BMD. Out of these 51 patients, 36 (70.6%) were diagnosed of osteopenia and 15 (29.4%) others were found to have osteoporosis. Vitamin D levels and severity of liver disease had correlation with low BMD.

Conclusion: Low BMD is highly prevalent in patients with chronic liver disease of variable aetiologies. We advocate more randomised and prospective studies to be conducted on homogeneous groups with chronic liver disease in its various stages. In view of numerous therapeutic options available both for liver disease and bone disease, it is prudent to characterize this condition in order to give these patients a better chance of survival with good quality of life.

Study of Autonomic Dysfunctions in Chronic Alcoholic and Alcoholic Liver Cirrhosis
Shashank Jaiswal
Dr. B. R. Ambedkar, Medical College

Introduction: Autonomic dysfunction is seen in liver cirrhosis, both in alcoholic and nonalcoholic and is associated with the severity of hepatic dysfunction. The pathogenesis of autonomic neuropathy in cirrhosis is not fully known and several mechanisms are suggested: circulatory changes in cirrhosis, metabolic and neurohormonal alterations including renin angiotensin aldosterone system, excessive nitric oxide production, oxidative stress and inflammatory mediators.

Clinical manifestations result from a loss of function e.g., impairead baroreflexes leading to orthostatic hypotension, overactivity (e.g., hyperhidrosis, hypertension, tachycardia, or loss of regulation e.g., autonomic storms, autonomic dysreflexia of autonomic circuits. The blood pressure is noted in response to posture, mental arithmetic, isometric exercises of hand, sudden loud noise, immersion of hand in cold water, apneic immersion of face in cold water; the heart rate tests in cold water; the heart rate tests include presence or absence of sinus arrhythmia, heart rate response to standing, Valsalva’s ratio and apneic immersion of face in cold water.

Little is known about the total autonomic function in patients with cirrhosis.

Isolated sympathetic nervous system tests have shown features of peripheral sympathetic failure.

Aims and Objectives
The main objectives of the study were:
1. To detect asymptomatic autonomic functions in patients of alcoholism and alcoholic cirrhosis.
2. To locate the probable site of lesion of autonomic pathway-afferent arc, efferent arc or central connections of parasympathetic and sympathetic pathways.

Materials and Methods

Study Design: Single Centre. Non randomised cross sectional study.

Study Period: Study was conducted between October 2013 and July 2015 for a period of 22 months.

Selection of Study Subjects: Patients with age group of 27-60 years with history of alcohol consumption from 4-5 years and with alcoholic cirrhosis were taken.

Inclusion Criteria
1. Twenty five subjects with history of alcoholism for the last 4-5 years with no medical problem and with normal liver function tests.
2. Twenty five of alcoholic cirrhosis proven by endoscopic evidence of esophageal varices.

Exclusion Criteria
Patients with any of the following:
1. Diabetes mellitus
2. Emphysema
3. Cardiac failure, cardiac arrhythmias, pericardial effusion
4. Prolonged bed rest
5. Patients with decompensated cirrhosis e.g. cirrhotic encephalopathy
6. Patients on drugs known to produce autonomic abnormality e.g. antihypertensive, tranquilizers, antidepressants, diuretics, calcium channel blockers.
7. Patients diagnosed with hepatitis due to Hepatitis C virus and Hepatitis B virus.

Assessment of autonomic functions was done as follows:
2. CVS/Chest/CNS disorders
3. Autonomic Function Tests:
   a. Blood Pressure Tests:
      i. Postural fall
      ii. Response to mental arithmetic
      iii. Response to sudden loud noise
      iv. Cold pressor test
   b. Heart Rate Tests:
      i. Presence/Absence of sinus arrhythmia (Expiration/Inspiration ratio)
      ii. Valsalva Manoeuvre (Valsalva Ratio)
      iii. Apneic face immersion in cold water
iv. Heart Rate response to standing (Lying/Standing Ratio)

Conclusion
1. The results of this study conclude that autonomic dysfunction exists in patients of alcoholic liver disease.
2. It is even present in asymptomatic cases.
3. This derangement is localized to both sympathetic and parasympathetic pathways.
4. 40%of same group (Alcoholic cirrhosis) of patients showed the involvement of both sympathetic and parasympathetic pathways.
5. Among the alcoholic individuals, no abnormality of sympathetic and parasympathetic pathways was seen.
6. The etiology of autonomic dysfunction in alcohol liver disease patients seemed to be due to underlying liver disease.

The Study of TNF Alpha and Interleukin 6 (II-6) in Cases of Cirrhosis and its Correlation with Hepatic and Renal Impairment with Subacute Bacterial Peritonitis
Swathi T, Manisha Bais Thakur, Anita Rani
VMMC and Safdarjung Hospital

Introduction: Cirrhotic patients have both increased production and decreased metabolism of TNF alpha and IL 6, and their levels are increased in Subacute Bacterial Peritonitis (SABP), a complication with cirrhosis and ascites. These cytokines also act synergistically in production of Nitric Oxide and lead to splanchnic and peripheral vasodilation and activation of Renin Angiotensin Aldosterone System thereby leading to Renal Impairment and multi organ dysfunction. In our study the levels of TNF alpha and IL 6 in cirrhotic patients with hepatic and renal impairment with SABP and their correlation with mortality were studied.

Material: The study was conducted in the Department of Medicine, Vardhman Mahavir Medical College and Safdarjung hospital, New Delhi. It was a prospective correlational study. We studied 100 consecutive patients with. The diagnosis of cirrhosis was established by clinical and lab criteria. Impaired renal function was defined as serum creatinine values >1.5 mg/ dl. Impaired hepatic function was defined by decreased serum albumin, increased serum bilirubin and increased PR/INR. The severity of liver disease was evaluated using Child Pugh Score. Ascitic Fluid was sent to lab for cell count, biochemical assay, culture and sensitivity. Serum and Ascitic Fluid were also collected at Study entry (before the initiation of antibiotic treatment ) and 48 hrs later. Assays for TNF alpha and IL 6 in the serum and ascitic fluid were performed with ELISA using manufacture’s instructions.

Observations: Our study included 9% female and 91% male with ages ranging...
between 29 to 62 years. Out of the 100 patients – 43 belonged to without SABP group (Group II); 57 belonged to with SABP group (I), of which 25 had RI (Ia) and 32 had no RI (II).

The serum AST, ALT, bilirubin and creatinine had positive correlation and statistical significance with cytokine levels in group Ia. In the group Ia, the levels of cytokine correlated significantly with mortality.

While albumin and INR showed negative correlation and it was found to be not statistically significant with cytokine levels in the group Ia.

All patients in Group Ia had Child Score C, and all of them had increased levels of TNF alpha and IL 6 and the rise was statistically significant.

The serum and ascitic fluid TNF Alpha and IL 6 levels rise were found to be statistically significant in group Ia at day 0 and day 2. Percentage change in serum and ascitic fluid TNF alpha and IL 6 from day 0 to day 2 was found to be statistically significant.

Cytokine levels in serum and ascitic fluid were significantly higher in patients with SABP (group I) (plasma TNF alpha - 150.49 ± 27.93 Vs 66.94 ± 11.34, p value of <0.0005; plasma IL 6 - 148.67 ± 24.75 Vs 68.14 ± 11.07, p value of <0.0005; Ascitic Fluid TNF alpha - 164.98 ± 23.4 Vs 78.87 ± 15.72, p value of <0.0005; Ascitic Fluid IL 6 - 163.95 ± 20.49 Vs 82.46 ± 9.18, p value of <0.0005).

About 25 cirrhotic patients with SABP developed Renal Impairment and Hepatic Impairment and showed significantly higher plasma and ascitic fluid cytokine levels at diagnosis of infection (plasma TNF alpha - 276.6 ± 32.98 Vs 150.49 ± 27.93, p value of <0.0005; plasma IL 6 - 227.22 ± 35.09 Vs 148.67 ± 24.75, p value of <0.0005; Ascitic Fluid TNF alpha - 292.08 ± 34.27 Vs 164.98 ± 23.4, p value of <0.0005. Ascitic Fluid IL 6 - 302.73 ± 34.9 Vs 163.95 ± 20.49, p value of <0.0005).

Conclusion: It appears that TNF alpha and IL 6 production may enhance liver cell injury and lead to renal impairment, and their levels also correlated well with poor prognosis and mortality seen in SABP in cirrhotic patients with renal impairment. Hence we conclude, that the measurement of the cytokines levels are a non invasive simple method for diagnosis and prognostication in cirrhosis patients.

Table 1: Cross tabulation of LFT and KFT with serum and ascitic fluid TNF alpha and IL 6 in Group Ia

<table>
<thead>
<tr>
<th>Cytokine Levels</th>
<th>ALT</th>
<th>AST</th>
<th>Bilirubin</th>
<th>Albumin</th>
<th>Log creat</th>
<th>INR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNF Alpha</td>
<td>0.926</td>
<td>0.879</td>
<td>0.919</td>
<td>0.925</td>
<td>0.366</td>
<td>0.912</td>
</tr>
<tr>
<td>TNF Alpha P</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<td>25</td>
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</tr>
<tr>
<td>IL 6</td>
<td>0.926</td>
<td>0.879</td>
<td>0.919</td>
<td>0.925</td>
<td>0.366</td>
<td>0.912</td>
</tr>
<tr>
<td>IL 6 P</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
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<td>N</td>
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</table>

**On applying Chi square test, A p value of <0.0005 shows that there is a significant correlation between Serum and Ascitic Fluid TNF alpha and IL 6 with mortality in Group Ia patients.**

**Etiology, clinical profile and Neutrophil Gelatinase Associated Lipocalin (NGAL) levels in acute kidney injury in patients with cirrhosis of liver**

Mukta Wyawahare, Sai Krishna Reddy S, Priyamvada PS, Soundravally R

JIPMER

Introduction: The clinical course of cirrhotic patients is often complicated by a number of sequelae that occur regardless of cause of cirrhosis. Acute kidney injury (AKI) in patients with cirrhosis is associated with high mortality and morbidity. The exact incidence of AKI in cirrhotic patients is largely unknown and is underestimated. Most of the studies are retrospective studies and focused on only particular sub types of AKI rather than whole spectrum of AKI. Once AKI develops there is 4 fold increase risk of mortality. Hepatorenal syndrome is associated with poor prognosis. In cirrhosis patients, creatinine is not a good marker of acute kidney injury, because they have low serum creatinine, due to decreased production and low muscle mass. In this regard, recent studies have shown that a novel kidney biomarker, neutrophil gelatinase associated lipocalin (NGAL), is over expressed in renal injury and so its measurement in urine is helpful in early diagnosis of renal injury.

Research design and Methods: This was a prospective observational study of 120 patients with cirrhosis and ascites conducted in JIPMER. Patients satisfying the inclusion and exclusion criteria after obtaining informed consent were included in the study. Detailed history, physical examination, baseline lab tests, viral serologies, CRP and ultrasonography of the abdomen and kidneys were done. Urinary NGAL, serum creatinine and urinary creatinine was done on day 0 and day 3 in all patients, and on day 5 in those with renal failure. Clinical course in hospital and after discharge was recorded and patients were followed up after 90 days.

Results: The prevalence of acute kidney injury in this study was 50% diagnosed by AKIN criteria. Mean age (± SD) of the patients in AKI group was 50.17 ± 12.7, and in the group without AKI was 44.95 ± 12.5. Etiology of cirrhosis was alcohol related (74%), post-necrotic cirrhosis was found in 24% of which Hepatitis B (9%) and Hepatitis C was (6%), cryptogenic cirrhosis was (14%), and autoimmune cirrhosis was (1%).

The common causes of acute kidney injury were Hepatorenal syndrome (45%) and pre-renal (43%). Patients with high levels of urinary NGAL levels at admission were associated with increased mortality (P<0.01).

There was a correlation between MELD class (P=0.007) and u NGAL levels> 53.3 ng/ml(p=0.015) independently with the mortality. Odds ratio for u NGAL > 53.3 at admission is 5.576 for 90 day mortality.
In Vitamin D_3 deficiency associated with

Myalgia | Hypertension | Diabetes

**CALCIROL**

- **Gems**
  - 60,000 IU Vit. D_3 Softgel

- **CT**
  - 60,000 IU Vit. D_3 Chewable Tablet

- **Drops**
  - Vitamin D_3
  - 800 IU/ml

- **Sachet**
  - 60,000 I.U.
  - Vit. D_3 Granules

India's 1st Vitamin D_3
50 Year Trust
100 million patients

Think Vitamin D think CALCIROL
**Conclusion:** The prevalence of AKI in our study population was 50%. Common causes were Hepatorenal syndrome and pre-renal azotemia. Patients with renal failure had higher urinary NGAL values at admission compared to those without renal failure (p<0.001). Patients with high levels of urinary NGAL at admission were associated with increased short term mortality.

**Clinical and Laboratory Profile and Determinants of Short Term Clinical Outcome in Acute Liver Failure**

**Vignesh Chidambaram, Hamide A, Mohan P**

JIPMER

Acute Liver Failure (ALF) is a serious and challenging syndrome with high mortality in India. MELD score and KCH criteria are commonly used as indicators of prognosis in ALF but there is a need for determining their prognostic accuracy in Indian adult population. The aim of our study was to identify the etiology, the prognostic indicators and the utility of MELD score and KCH criteria in ALF.

A prospective observational study was conducted between September 2015 and August 2016 including all patients satisfying the criteria for ALF (altered mental status, INR > 1.5, duration of illness < 26 weeks) admitted in the departments of Medicine and Medical Gastroenterology of JIPMER, Puducherry.

A total of 84 patients (mean age 38 ±14.9, 55 males) were included in the study, 56/84 patients (66.66%) survived with medical therapy and 28/84 patients (27.38%) died in hospital, while 5/84 patients discontinued hospital admission before the end of treatment and were excluded from the final analysis. Etiology was ascertained in 61/79 patients (77.21%); viral hepatitis in 37 patients (46.83%) and poisoning due to yellow phosphorus containing rodenticides in 24 patients (30.77%). The viral hepatitis were due to isolated HAV in 8 (21.52%), HBV in 7 (19.11%), HEV in 7 (18.91%), and co-infections with HAV and HBV in 8 (21.62%), HAV and HEV in 7 (18.91%) and HBV and HEV in 1 (2.7%). Multivariate logistic regression showed that the presence of at least 3 of the following - Creatinine ≥ 1.5 mg/dL, Platelet count < 175000/mm³, Na < 135 mEq/L and Serum albumin < 3g/dL, was able to predict the outcome at the end of 28 days with an accuracy of 84.81%. MELD score of ≥ 33 and KCH criteria had a prognostic accuracy of 62.02% and 65.82% respectively. Presence of at least 3 out of the 4 above mentioned parameters (AUC, 0.842) was superior to MELD (AUC, 0.655) and the KCH criteria (AUC, 0.631) (P=0.0037 and P=0.0019 respectively) in predicting the outcome.

In our study, viral hepatitis accounted for nearly one-half of the cases of ALF. Alteration of at least 3 out of the 4 variables, namely serum creatinine, platelet count, Na⁻ and serum albumin, was more accurate than the MELD score and KCH criteria in predicting 28-day mortality irrespective of the cause of ALF.

**Large Volume Paracentesis in Patients with Hepatorenal Syndrome and Refractory Ascites - Is there Hope for Rural India**

**Arun Kumar C, Ajoy Krishnamurthy, Pavitra L MVJ Medical College, Hoskote, Bangalore 562114, Karnataka**

**Introduction:** Hepatorenal syndrome (HRS) is a syndrome of functional renal failure occurring in patients with advanced liver failure in the absence of clinical, laboratory, or histological evidence of other known causes of renal failure. However HRS has always been considered to be potentially reversible.

**Aims:** To determine if large volume paracentesis with noradrenaline and albumin infusion can prevent the development of HRS.

**Materials and Methods:**

- Type of study: Prospective Observational clinical study. Dept. Of Medicine, patients admitted to MVJ MC& RH Hoskote.
- Patients with an RRI of > 0.70 were included in the study.
- A protocol for LVP (Large volume paracentesis) was laid down and followed in each case. Follow up RRI was done on 2nd day, 7th day and after 2 months.

**Results:** 184 patients with cirrhosis of liver with tense ascites underwent RRI by USG Doppler. 53 patients with RRI of > 0.7 died in hospital, while 14.5%(n=14) died. Alcohol was found to be the common etiology followed by hepatitis B. Majority of them belonged to 40-59 year age group with sex wise male predominance. The results of the study showed Anaemia, Hyponatremia, Coagulopathy, SBP, HE and HRS as strong predictors of mortality with a p value of < 0.05 for each of them. ROC curve analysis yielded a higher sensitivity and specificity for MELD score which was found to be a better predictor of 3 month mortality as compared to CTP based on area under ROC curve.

**Conclusion:** Anaemia, hyponatremia, coagulopathy, HE, SBP & HRS are strong mortality predictors in patients with cirrhosis and should be considered as red flag signs by treating physicians during patient management. MELD score would be a better predictor of 3 month mortality as compared to CTP score.

**Study of Complications of Liver Cirrhosis and their Impact on Survival**

**Asha Thomas, R Rai, A Jain, A Thomas**

NSCB medical college, Jabalpur

**Introduction:** Liver cirrhosis once decompensated is associated with a poor prognosis for which the only curative treatment is liver transplantation. The aim of the study was to study the complications of cirrhosis and to find out those complications that can be attributed to mortality so that intervention can be done at the earliest. The study also aimed at determining the predictive efficacy of CTP Vs MELD score in the determination of 3 month mortality.

**Materials:** This study was done on 96 patients with the diagnosis of cirrhosis based on clinical, biochemical plus radiographic (USG) evidence. These patients were followed up for a period of 3 months & complications were assessed at the time of their admission & prognostication was done using both MELD & CTP scores. Outcome of these patients were assessed in terms of survival Vs mortality at the end of 3 months.

**Observations:** Out of the 96 patients studied, 85.4%(n=82) of them survived while 14.5%(n=14) died. Alcohol was found to be the most common etiology followed by hepatitis B. Majority of them belonged to 40-59 year age group with sex wise male predominance. The results of the study showed Anaemia, Hyponatremia, Coagulopathy, SBP, HE and HRS as strong predictors of mortality with a p value of < 0.05 for each of them. ROC curve analysis yielded a higher sensitivity and specificity for MELD score which was found to be a better predictor of 3 month mortality as compared to CTP based on area under ROC curve. The cut off value of MELD & CTP above which maximum mortality occurred was found to be 21.5 & 11.5 respectively.

**Conclusion:** Anaemia, hyponatremia, coagulopathy, HE, SBP & HRS are strong mortality predictors in patients with cirrhosis and should be considered as red flag signs by treating physicians during patient management. MELD score would be a better predictor of 3 month mortality as compared to CTP score.

**A Study of Serum Prolactin Level and its Relation with Child Pugh Classification for Prediction of Severity in Patients of Chronic Liver Disease**

**Pallavi Vij, CP Meena, Deepshi Sharma, Javed Sayyed, Mukesh Verma**

GMC Kota

**Introduction:** Chronic liver disease has been associated with various hormonal alteration causing a typical feminisation syndrome, one such is hyperprolactinemia. The rise in serum prolactin level in chronic liver disease patients can be attributed to hypothalamo-pituitary-gonadal axis dysfunction, reduced peripheral elimination...
Study of Hyponatremia in cirrhosis of liver and its prognostic value

Gaurav Agarwal, Satish Kumar Singh, Gaurav Agarwal
Nalanda Medical College Hospital, Patna

Introduction: Hyponatremia is defined as reduction in serum sodium below 135 meq/L. Dilutional hyponatremia associated with liver cirrhosis is caused by impaired free water clearance. Several studies have shown that serum sodium levels correlate with survival in cirrhotic patients. Low serum sodium concentration is an independent predictor of mortality in patients with cirrhosis, but its prevalence and clinical significance is unclear. Little is known regarding the relationship between the degree of dilutional hyponatremia and development of cirrhotic complications.

Aims: 1. To study the prevalence of hyponatraemia in cirrhosis 2. To evaluate the association between hyponatremia and complications in cirrhosis and its prognostic value.

Materials and Methods: A hospital based survey was conducted on 200 patients of liver cirrhosis admitted to Nalanda Medical College Hospital, Patna during the study period of two years from October 2014 to September 2016. Informed consent was obtained from all patients enrolled for the study. The data of the patients was collected in a well designed pro forma (consisting of the patient’s particulars, detailed history, clinical examination and investigations). The status of the patients at the time of inclusion (inpatient or outpatient) as well as severity of cirrhosis was assessed using Child-Pugh score, Model for End Stage Liver Disease (MELD) Score, and MELD-Sodium (MELD-Na) Score.

The selection of patients was based on the findings of clinical examinations, biochemical tests and ultrasound. The patients were followed over a period of six months with serum sodium levels measured at regular intervals of 2 months, 4 months and 6 months. A comparative analysis of the incidence of individual complications of cirrhosis as well as mortality was made with different values of serum sodium determined in these cirrhotic patients.

Investigations Done: Serum Sodium, Prothrombin Time (PT/INR), Total protein with Serum Albumin and Globulin along with A-G Ratio, Serum Bilirubin (both total as well as direct fraction), Serum Creatinine, Blood Urea Nitrogen, Ultrasound Whole Abdomen, Upper Gastrointestinal Endoscopy

Inclusion Criteria: All patients with cirrhosis of liver

Exclusion Criteria: 1. Patients with decompensated heart disease 2. Patients with chronic kidney disease 3. Patients on drugs like SSRI, TCA, MAO inhibitors, cytotoxic drugs etc. 4. Patients taking diuretics and other anti-hypertensive medications.

Observations: The mean age of all the patients included in the study was 49.58 years and no definite correlation could be established between increasing age and the severity or frequency of complications. Out of the 200 patients included in the study, 82% were males and 18% were females. Based on the etiology, alcohol was found to be the cause of cirrhosis in 54% of the patients, Hepatitis B infection was found in 30% patients, and Hepatitis C was found in 8% patients. In 6% of the patients, both alcohol and Hepatitis B infection was found to be a culprit and 2% of the patients were found to have Autoimmune Hepatitis. Patients with Hepatitis B and Hepatitis C infection were found to have worse prognosis with higher incidence and severity of complications as compared to patients with cirrhosis due to alcoholic liver disease.

Serum sodium levels below 130 meq/L were found in 36% of the patients, whereas levels between 130-135 meq/L were found in 26% of the patients. The serum sodium level was strongly associated with the severity of liver function impairment as assessed by Child-Pugh, MELD, and MELD-Na scores (p<0.0001). Hepatic encephalopathy was found in 34% of the patients, out of which 20% patients had sodium levels <130 and 8% had sodium between 130-135 meq/L. The study of 6% cases of hepatic encephalopathy occurred in patients with sodium levels higher than 135 meq/L. Moreover, sodium levels less than 130 meq/L indicated the existence of grade III or higher hepatic encephalopathy. Gastrointestinal bleed occurred in 38% patients, out of which 12% had sodium <130 meq/L, 12% had sodium levels between 130-135 meq/L, and the rest 14% had sodium >135 meq/L, thereby reflecting no association of GI bleeding with serum sodium levels.

Hepatorenal syndrome occurred in 12% of the patients, among which 8% had sodium levels below 130 meq/L. 2% of these patients had sodium between 130-135 and another 2% had sodium >135 meq/L. Coagulopathy occurred in 10% patients, among which 6% had sodium levels below 130 meq/L. Mortality occurred in 16% of the patients, out of which 10% had sodium below 130 and 4% had sodium between 130-135.

Our study also showed that MELD-Na is a better marker of prognosis than MELD score alone as MELD-Na scores were associated with better prediction of complications and mortality from liver cirrhosis.

Conclusions: Dilutional hyponatremia is frequent in cirrhotic patients and low serum sodium levels in cirrhosis are associated with severe complications of liver cirrhosis like hepatic encephalopathy, hepatorenal syndrome, coagulopathy. Hyponatremia in cirrhosis is not associated with higher incidence of GI bleed. Severe hyponatremia is also associated with higher morbidity and mortality and MELD-Na scores are
a better marker of prognosis than MELD scores alone. Thereby, incorporation of serum sodium levels in MELD score seems to be a better measure and treatment of hyponatremia is important to prevent possible complications of liver cirrhosis.

HIV

Renal Dysfunction in patients with Tenofovir Based Antiretroviral Therapy

Rudra Prasad Sahu, Jaya Chakravarty, Shyam Sundar

Institute of Medical Sciences, Banaras Hindu University, Varanasi

Introduction: The National AIDS control organization (NACO) is providing 9.02 lakhs PLHIV (people living with HIV) free antiretroviral therapy (ART) as per its annual report 2015. Tenofovir (TDF) a nucleotide reverse transcriptase inhibitor along with lamivudine and Efavirenz as a single pill is the current recommended first-line ART in the program. Tenofovir has a favorable pharmacokinetic profile, good antiviral potency, relatively safe, high tolerability and low incidence of mitochondrial toxicities however it is known to cause nephrotoxicity. Studies from India has reported higher incidence of nephrotoxicity among Indians as compared to Caucasians. Thus it becomes important to know the prevalence and risk factor for renal dysfunction among patients on tenofovir in programmatic condition.

Methods: This retrospective study was conducted in the ART Centre, BHU, Varanasi. Data of all HIV positive patients started on TDF based ART between January 2010 and May 2016 with ≥1 serum creatinine level after starting therapy were included in the study. Serum creatinine was measured at baseline and 6 monthly thereafter and Glomerular filtration rate (eGFR) was calculated by Modification of diet in renal disease (MDRD) equation. Renal dysfunction was defined as serum creatinine >1.5 mg/dl at the end of follow up as per NACO guidelines. All the analysis was done by chi square test and binary logistic regression analysis was performed to analyse the associations between variables.

Observation: During the study period, 2445 patients were started on TDF based regimen, out of which 1795 patients with ≥1 serum creatinine measurement were included in the analysis. Mean duration of follow up was 21.73 months. 94(5.24%) patients developed renal dysfunction i.e. serum creatinine ≥1.5 mg/dl after starting of tenofovir. Out of 94 patients, 3 patients had serum creatinine ≥1.5 mg/dl at baseline. On multivariate analysis statistically significant risk factor for renal dysfunction was seen in patients with age ≥40 years [OR 3.35; 95 % CI: 2.090-5.379], male patients [OR 3.138; 95 % CI: 1.650-6.401], BMI ≥23 kg/m² [OR 1.851; 95 % CI: 1.022-3.354] and baseline renal dysfunction ≥1.5 mg/dl [OR 24.876; 95 % CI: 9.225-67.085] with p-value of <0.05. Mean duration of change in serum creatinine was 15.23 months with mean derangement in serum creatinine was 2.63 mg/dl. When we used creatinine clearance <60 ml/min/1.73 m² to define renal dysfunction, the prevalence of renal dysfunction in our study was 10.36% (186/1795) patients. However it was observed in our study that 3.62% (65/1795) patients who had serum creatinine <1.5 mg/dl had creatinine clearance ≤50 ml/min/1.73 m², while 1.95% (35/1795) patients who had serum creatinine <1.2 mg/dl had creatinine clearance ≤50 ml/min/1.73 m² by MDRD formula at their baseline.

Conclusion: Under programmatic condition renal dysfunction in patients started on tenofovir based therapy is high in eastern India thus regular monitoring of serum creatinine is strongly recommended.

Table 1: Baseline characteristics of patients on tenofovir based Antiretroviral therapy

<table>
<thead>
<tr>
<th>Variables</th>
<th>(n=1795)</th>
<th>Mean±SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age(years)</td>
<td>Male n (%)</td>
<td>36.01±9.81</td>
<td>0.001</td>
</tr>
<tr>
<td>Sex</td>
<td>Female n (%)</td>
<td>960 (53.5)</td>
<td>0.335</td>
</tr>
<tr>
<td>Weight(Kgs)</td>
<td>Mean±SD</td>
<td>48.28±0.45</td>
<td>0.042</td>
</tr>
<tr>
<td>Height(cm)</td>
<td>Mean±SD</td>
<td>158.15±11.79</td>
<td>0.042</td>
</tr>
<tr>
<td>BMI(kg/m²)</td>
<td>Mean±SD</td>
<td>19.2±3.74</td>
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</tr>
<tr>
<td>Education (n)</td>
<td>%</td>
<td>549 (30.6)</td>
<td>0.042</td>
</tr>
<tr>
<td>Urban/Rural</td>
<td>Rural</td>
<td>1158 (64.5)</td>
<td>0.042</td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>1391 (77.5)</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>300 (16.7)</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>10 (0.6)</td>
<td>0.042</td>
</tr>
<tr>
<td>Alcohol intake</td>
<td>Alcoholic</td>
<td>248 (13.8)</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>Non alcoholic</td>
<td>1547 (86.2)</td>
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<td>HBsAg status</td>
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<td>1736 (96.7)</td>
<td>0.042</td>
</tr>
<tr>
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<td>Positive</td>
<td>59 (3.3)</td>
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<tr>
<td>CD4 count</td>
<td>Median(µL)</td>
<td>298 (150-489)</td>
<td>0.042</td>
</tr>
<tr>
<td>Last CD4 count</td>
<td>Baseline CD4 count</td>
<td>475 (327-656)</td>
<td>0.042</td>
</tr>
<tr>
<td>Baseline Serum creatinine (mg/dl)</td>
<td>Mean±SD</td>
<td>0.827±0.248</td>
<td>0.042</td>
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<td>Baseline CCr (ml/min/1.73 m²)</td>
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<td>107.73±35.82</td>
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Table 2: Univariate and multivariate analysis between renal dysfunction and no renal dysfunction

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**Effect of HAART on Lipodystrophy and Lipid Metabolism in Patients with HIV**

Gopal Krishna Bohra¹, Madhulata Agrawal², Deepak Kumar³

¹AIIMS Jodhpur; ²SMS Medical College Jaipur; ³Dr. S.N. Medical College Jodhpur

**Introduction:** HIV induced lipodystrophy also known as HIV Adipose Redistribution Syndrome (HARS) is a disabling and many a times disfiguring disorder which has a wide range of implications. It is often attributed to the use of nucleoside reverse transcriptase inhibitors as well as protease inhibitors. There is paucity of data on prevalence as well as pattern of lipodystrophy and lipid abnormalities in these patients.

**Material and Method:** We conducted a cross sectional case series study of 220 patients in ART Centre at a tertiary care centre at Jodhpur. The aim of the study was to assess and compare the lipid abnormalities as well as pattern of lipodystrophy in patients on various regimes of HAART. The patients were evaluated for their lipid profile, CD 4 count as well as anthropometric parameters and evidence of lipodystrophy.

**Observation:** We studied 220 patients with HIV infection of more than 6 month duration. 79(46.5%) of patients on HAART developed lipodystrophy (Group A) while 91 patients (53.5 %) on HAART did not develop lipodystrophy (Group B). The incidence of lipodystrophy increased with duration of therapy. There was no statistically significant difference in CD 4 counts in these groups. 56.25% patients on Stavudine developed lipodystrophy while 34.9% patients on Zidovudine developed lipodystrophy. 22.2% patients on Tenofovir without protease inhibitor regimes developed lipodystrophy while 46.15% patients on protease inhibitor regimes developed lipodystrophy.

**Study of Depression in HIV Patients**

Dinesh Malviya, R Rai, A Jain

NSCB Medical College, Jabalpur

**Introduction:** Depression is a state of low mood and aversion to activity that can affect a person’s thoughts, behavior, feelings and sense of well-being. In recent studies, lifetime prevalence of depressive disorders in HIV individuals was found to be 22% and that in the general population was 3% to 10%. The aim of our study is to find the occurrence of depression in HIV/AIDS individuals and study the clinical profile of depression in patients of HIV/AIDS, and effect of treatment of depression in patients of HIV/AIDS.

**Materials:** It was an observational study including 269 HIV positive patients who were willing to be a part of the study. Patients having any long term illness apart from HIV/AIDS leading to depression were excluded from the study. Depression was measured by using following scales: GENERAL HEALTH QUESTIONAIRRE–28 (For screening of HIV/AIDS patients for psychiatric illness), DSM IV SCALING (For diagnosis of depression), HAMILTON SCALE (For severity analysis of depression), MMSE SCALE (For assessment of cognitive function).

**Observations:** Out of 269 HIV cases, 63 were found to have depression (23.42 %). Out of the 63 having depression, 47 (74.6%) were found to have depression. 15 (23.8%) were having moderate depression; 01(1.6%) were having severe depression. Depression was found to be more common in 30 to 39 yrs of age group (26.2%), with male predominance (26.5%) as compared to females (20.3%). Depression was more common among patients with CD4 count ≤ 300 (24.7%) compared with > 300 CD4 count group (22.0%). On follow up, 28 out of the 40 depressed HIV patients (who received antidepressants) showed recovery (70%).

**Conclusion:** Depression was found to be common among the HIV/AIDS patients. Depression was more common among males, among 30-39 year age group and among patients with lower CD4 count. Early and compliant antidepressant therapy is very effective in treating depression among the HIV/AIDS patients.

**Table 2: Univariate and multivariate analysis between renal dysfunction and no renal dysfunction**

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<tr>
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<th>p-value</th>
<th>Multivariate Odds ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of treatment</td>
<td>0.77(0.51-1.25)</td>
<td>0.318</td>
<td>1.175(0.76-1.80)</td>
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<td>≥4 months</td>
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<tr>
<td>&lt;4 months</td>
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<tr>
<td>Treatment status</td>
<td>0.74(0.49-1.13)</td>
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<td>Shifted to Tenofovir</td>
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<tr>
<td>ART naïve</td>
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Study of AIDS related NHL - a single centre experience

Sheela Sawant, Aruna Alahari Dhir, Anuprita Daddi, Manju Sengar, Tanuja Seth
Dept of General Medicine, Tata Memorial Hospital, Parel, Mumbai 400012, Maharashtra

Objective: To study the clinicopathological profile and outcome of patients with AIDS related NHL.

Methods: This is an interim analysis of a prospective study on AIDS related NHL (ARL) conducted at a tertiary referral cancer centre. Consecutive patients diagnosed with ARL who were treatment naive were included in the study. Demographic details, CD4 counts, HIV viral load, HAART, histopathology, IHC, ARL treatment details, complications and outcome were recorded. Effect of predictor variables on overall survival was analyzed. Data was analysed using IBM SPSS statistics 20 software.

Results: There were 22 patients of ARL seen in the study period January 2014-April 2015. Males were predominant (72.7%). Median age was 42 yrs (range-24-54 yr). 11(50%) were known HIV positive (range 7 months-11.5 yr). Median CD4 cell count at diagnosis of NHL was 108. Median HIV viral load at diagnosis - 77232 copies/ml. 9 (41%) patients were on HAART prior to NHL diagnosis. 77.3% had stage IV NHL. 16 patients received chemotherapy and 8 patients received radiotherapy. Response was assessed by PET CT in 10 patients after 4 cycles of Chemotherapy. 7 patients had complete remission and 3 patients had partial remission of disease. Of the 22 patients 8 are living, 11 expired and 3 were lost to follow up. Overall median survival was 4 months (95% CI 0-14). The HIV viral load at diagnosis was 4 months (95% CI 0-14). The HIV viral load at diagnosis was 4 months (95% CI 0-14).

Conclusions: In our study most patients of ARL presented at a younger age and with advanced disease. Higher proportion of plasmablastic lymphomas were seen in our study. The overall survival of patients with ARL is poor.

Prevalence of Hypogonadism in HIV Infected Males and its Correlation with their Metabolic Status

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Introduction: Endocrine abnormalities, including androgen deficiency, adrenal dysfunction, insulin resistance, and dyslipidemia, are common among HIV-infected patients. Androgen deficiency in men, evidenced by low testosterone (T), levels, has been found to be associated with lower CD4 cell count, advanced stage of illness, medication use, and weight loss. Despite its frequent occurrence, the actual prevalence of T deficiency remains not well defined in HIV-infected patients and its association with other metabolic and endocrine abnormalities needs to be assessed. This study was conducted to determine the prevalence of hypogonadism in HIV infected males and to study its relation to age, CD4 count and duration of highly active antiretroviral therapy (HAART) and also its correlation with their metabolic status.

Materials and Methods: A total of 81 outpatient HIV positive cases and 82 healthy controls were included in the study. Each subject underwent a complete physical examination and serum FPG, HbA1c, Lipid profile, total testosterone (TT), FSH, LH, TSH, FT3 and FT4 levels were estimated from early morning fasting venous sample. Serum TT level<300ng/dl, or TT>300ng/dl along with high LH and FSH (compensatory hypogonadism) were taken as markers for hypogonadism and it was correlated with age, CD4 count, duration of HAART and metabolic status of the patient.

Results: A total of 21 (25.9%) out of 81 cases were found to have hypogonadism as compared to 4 (4.9%) out of 82 controls. Of these 21, 14 cases had secondary hypogonadism, 5 had primary hypogonadism and remaining 2 had compensatory hypogonadism. The mean serum TT value among cases (371.7±102.9ng/dl) was significantly lower than that among controls (419.7±71.5ng/dl) (p=0.007). Furthermore, hypogonadism was found to be significantly associated with the age of the patient (p=0.007), CD4 count (p=0.002) and duration of HAART (p=0.04) and was independent of the BMI (p=0.9) and the waist circumference (p=0.8). Dyslipidemia and dysglycemia were significantly more common among cases as compared to controls (p<0.05) but were not associated with hypogonadism.

Conclusion: The prevalence of hypogonadism is higher among HIV infected males as compared to healthy individuals. Secondary hypogonadism was found to be more common than primary hypogonadism in HIV infected males. Hypogonadism was also significantly associated with age of the patient, CD4 count and duration of HAART and was independent of BMI and waist circumference. It was also found that metabolic derangements, though more common in HIV infected patients as compared to the general population, were not associated with hypogonadism.

Hypertension

Clinical Study of Hypertensive Crisis in Medicine Ward

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Introduction: In India, prevalence of hypertension increased from 5% in 1960s to nearly 12% in 1990s, to more than 30% in 2008. It is estimated that approximately 1% of patients with hypertension develop a hypertensive crisis at some point. Although chronic hypertension is an established risk factor for cardiovascular, cerebrovascular, and renal disease, even acute elevations in BP can result in acute end-organ damage with significant morbidity. This study aimed to analyze the risk factors, modes of presentations and spectrum of end organ damage in HC.

Material: This study were done on patients with SBP ≥180 mmhg or DBP ≥120 mmhg admitted in medicine ward, SGMH, Rewa from march 2015 to may 2016 (200 patients). On admission detailed history, complete clinical examination, and necessary investigations like (blood and urine chemistry, ECG, CXR, fundoscopy, etc) were done know the end organ damage.

Observations: In our study of 200 patients of hypertensive crisis (HC), 144 individuals (72%) met the criteria for hypertensive emergency (HE) and 56 (28%) met the criteria for hypertensive urgency (HU). Patients with HE were older (P<0.001), more sedentary (P=0.037), more smoker (p=0.0073) and more non adherence to anti hypertensive medications (p=0.049) than those with HU. Furthermore, fewer HE patients than HU patients had known history of hypertension (P=0.0029). The groups did not differ regarding BP levels, gender, obesity, alcohol, known history of diabetes and family history of hypertension. Neurological deficit (47.22%), Dyspnea (37.5%) and Chest pain (25%) were common presentation in those with HE. Meanwhile, in the group with HU, we most frequently found Headache (44.64%), Giddiness (42.86%), followed by Epistaxis (37.5%). Retinopathy (66%), Ischemic stroke (23%), Hemorrhagic stroke (16%), Acute heart
failure (18%) and Acute coronary syndrome (16%) were target-organ damage in HE. Mortality among all cases of hypertensive crisis was 9%.

Conclusions: The prevalence of hypertensive crisis in the patients admitted to the ICU is approximately 1.76%. This study highlights the importance of knowing the associated risk factors, clinical profile and the most frequent types of target-organ damage in individuals who present with HC. The early detection of end organ damage and appropriate treatment are key determinants to avoid this severe complication of hypertension.

The Study of Blood Pressure Variability and Effect of Antihypertensive Treatment on Outcome in Intracerebral Hemorrhage
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Introduction: Stroke is the second leading cause of death worldwide, after ischemic heart disease. Although the hemorrhagic stroke is less common (15%) than ischemic stroke, this stroke is associated with higher mortality rates than ischemic stroke. The treatment of acute hypertension in subjects with ICH is highly controversial as the effect of pharmacological reduction of mean arterial pressure (MAP) on cerebral blood flow (CBF) is unclear. There is strong evidence to suggest that one third of the subjects presenting with ICH continue to demonstrate lesion expansion in the next few hours after the initial ictus. This situation can lead to clinical deterioration and death. Persistently elevated BP may predispose the subject to hematoma expansion.

AIM:
1. To study the time course of elevated blood pressure in intracerebral hemorrhage.
2. To study the effect of antihypertensive treatment on outcome in intracerebral hemorrhage.

Materials and Method: The present study was carried out in 96 patients of intracerebral hemorrhage presented to us within 24hrs and with BP >140/90, proven by CT scan, admitted in Medical wards of Gandhi Memorial and Associated Hospitals, King George’s Medical University, Lucknow.

Exclusion Criteria
- Traumatic intracerebral hemorrhage.
- Patients with very low general condition [GCS <4].
- Patients with severe systemic illness or neoplasm.
- Patients with renal failure [serum Creatinine >3].
- Patients with chronic liver disease.
- Patients with bleeding diathesis.
- Unwilling or uncooperative patients.

CT scan of the selected patient was done at the time of admission.

Evaluation of all the patients was carried out as follows:
- Detailed history including Mode of onset of neurological manifestation was carefully checked. History of hypertension, diabetes, smoking or alcohol, Nature of treatment and adequacy of treatment was asked.
- Physical Examination: Detailed physical examination was carried out.
- Blood pressure; this was recorded every 6 hour for first 48 hour then 12 hourly.
- Cardiovascular system Examination; in all cases
- Central nervous system Examination; in all cases; the following has been specially recorded.

CT SCAN AND MRI brain was done.

Assessment and improvement monitored by:
1. Level of consciousness according to Glasgow coma scale (GCS).
2. Extent and severity of focal neurological deficit on MRS scale and NIHSS score.

Observations: Both the groups were matched for
- Age, sex.
- Blood pressure at the time of admission.
- Risk factors viz. diabetes mellitus, hypertension, smoking, alcohol intake.
- Severity of disability viz. GCS, MRS, NIHSS at presentation
- CT scan findings viz. volume, midline shift, intraventricular extension.

1. In the Group1, out of 44 patients, 24(54.5%) and in Group2 out of 52 patients 23(44.23) were hypertensive.

2. The survival rate at 30 days in Group1 was 81.6% and in Group2 was 84.6%, difference was statistically non-significant (p>0.05).

3. The MRS at 7th day in Group1 (4.47±0.61) and in Group2 (3.67±1.23), NIHSS at 7th day in Group1 (21.47±4.56) and in Group2 (18.04±6.87), the decrease in MRS and NIHSS was statistically significant (p<0.001) in Group1 but not in Group2.

4. The MRS at 30 day in Group1 (3.94±0.73) and in Group2 (3.30±1.08), NIHSS at 30 day in group1 (20.17±4.58) and in group2 (16.05±4.48), the decrease in MRS from day of presentation was statistically significant in both group (p<0.001), but the decrease in NIHSS was statistically insignificant (p>0.5) in Group1 and significant in Group2 (p<0.001).

5. The findings of small size sluggish reacting pupil at presentation doesn’t significantly alter the outcome (p<0.05). The patients of GCS ≤8 at presentation results in poor outcome. As in Group1, only 2 out of 8 survived (25%), in group2, only 5 of 9 survived (55%).

6. The SBP higher (>200 mm Hg), DBP (>110mm Hg) and MAP (>130 mmHg) at presentation results in poor outcome (p<0.05) in both groups.

7. On CT Scan finding, the volume of hemorrhage of >30ml resulted in poor outcome in both groups(p<0.05). similarly, the midline shift of >5mm and presence of intraventricular extension resulted in poor outcome in both groups(p<0.05)

The mean NIHSS score at presentation of expired patient were higher than improved one in both group, but difference was found statistically insignificant (p>0.05) and significant (p<0.05) in group2 and the association of final outcome(expired/improved) MRS at presentation was found statistically insignificant(p<0.05) in both group.

Conclusion:
Blood Pressure: The mean SBP, DBP and MAP decrease significantly (p<0.001) in both groups, except that in Group2 it started decreasing from day1. The mean SBP,DBP and MAP of two groups were found similar (p>0.05) at all periods; though at final evaluation, the mean decrease in SBP,DBP and MAP of Group2 was 3%-5% higher as compared to Group1.

A. Outcome measures
1. After 1 month of follow up, similar proportion of outcomes between the two groups (18/4 vs. 44/8, χ²=0.09; p=0.765) though the favorable outcome (discharged) was 2.8% higher in group1 as compared to group2.

2. The overall survivals (6 months) of two groups was found similar.

3. The volume, midline shift, GCS score, SBP, DBP, MAP, MRS score and NIHSS score significantly associated with final outcomes.

B. Morbidity parameters: In both groups, the mean GCS, NIHSS, MRS scores increase (improve) linearly after the treatments. The improvement was higher in Group2 than Group 1.

Evaluation of Serum Uric Acid levels in Essential Hypertension
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Introduction: Elevated levels of uric acid have been identified as an independent predictor of hypertension severity and progression in various epidemiological studies. Also there is a growing body of data that suggests a role of hyperuricemia in pathogenesis of atherosclerosis and cardiovascular diseases (CVD) especially in patients with hypertension and type 2 diabetes mellitus. We conducted a study to evaluate serum uric acid levels in essential hypertension and its relation with severity and duration of essential hypertension.

Materials and Methods: A cross sectional
study was conducted at Rajindra Hospital/ Govt. Medical College, Patiala in which 180 patients of essential hypertension were included according to JNC VII criteria. Patients were further divided into categories based on severity (stage 1 and 2) and duration of hypertension since when the patient was first diagnosed as hypertensive (<5years and >5years). Serum uric acid levels were measured in the patients under study using Uricase-PAP test.

**Observations:** Mean serum uric acid (SUA) value was 6.04%g% and prevalence of hyperuricemia was 35% using cut-off value of 6.8mg% in patients under study. It was observed that mean SUA value in stage 2 category was 6.45 mg% against 5.21 mg% in stage 1 which was statistically significant (p<.001). It was also observed that in patients with duration of <5 years mean SUA value was 5.22 mg% and in those with >5 years mean SUA value was 6.96 mg% which was significantly higher than the former statistically (p<.001).

**Conclusion:** In view of our observations SUA can be used as a biomarker to determine the severity and duration of hypertension which in turn quantifies the CVD risk.

**Estimation of Serum Uric Acid Levels in Drug Naive Young Adult Subjects with Hypertension and its Relation with Serum Lipid Levels in a Tertiary Care Hospital Mysuru**

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**Mysore Medical College**

**Introduction:** Hypertension is common global lifestyle disorder. Clinically, it is defined as that level of blood pressure at which the institution of therapy reduces blood pressure related morbidity and mortality. Elevated blood pressure is defined as that level of blood pressure at which the institution of therapy reduces blood pressure related morbidity and mortality. Elevated blood pressure is defined as systolic blood pressure 140 mmHg and diastolic blood pressure >90 mmHg. About 80-95% of hypertensives fall in the category of essential or primary hypertension. Primary hypertension tends to be familial and is likely to be the consequence of an interaction between environmental and genetic factors. Prevalence of primary hypertension increases with age, and individuals with relatively high blood pressures at younger ages are at increased risk for the subsequent development of hypertension. Uric acid is the end product of purine metabolism in human beings. Human beings convert the major purine acid and serum lipid levels is a useful test for the clinician, as it carries important prognostic information in predicting future hypertension.

**Material:** A clinico-biochemical study included subjects aged between 18-40yrs who were drug naïve young adults with stage 1 hypertension ie, systolic BP of 140-159mm of hg and diastolic BP of 90-99mm of hg of 30 sample size and stage 2 hypertension ie, systolic BP of >160mm of hg and diastolic BP of >100 mm of hg of 30 sample size with 30 age matched normotensives ie, systolic BP of <120mm of hg and diastolic BP <80 mm of hg as controls. The study period was from August 2015 to August 2016. They were excluded if they were having any other known cause of raised uric acid levels and secondary hypertension.

**Observations:** Study showed that serum uric acid was raised in 18 out of 30 subjects with stage 1 drug naïve hypertensives and 20 out of 30 subjects with stage 2 hypertension in comparison to normotensives. Also 17 out of 30 stage 1 hypertensives and 24 out of 30 stage 2 hypertensives had hypercholesterolemia, 20 out of 30 stage 2 hypertensives. Both stage 1 and stage 2 hypertensives drug naïve young adults subjects age 18-40 years though it is much significant in stage 2 hypertensives.

**Conclusion:** Since essential hypertension remains a majormodifiable risk factor for cardiovascular disease despite important advances in our understanding of its pathophysiology and the availability of effective treatment strategies. Also there is strong positive and continuous correlation between blood pressure and the risk of cardiovascular disease, hence independent risk factors for hypertension like serum uric acid, serum lipid levels have an additive effect in diagnosing future hypertensives in young age. By above study as there is both hyperuricemia and dyslipidaemia in both stage 1 and stage 2 hypertensives drug naïve young adults subjects age between 18-40years though it is much significant in stage 2 hypertensives.

We conclude that measuring serum uric acid and serum lipid levels is a useful test for the clinician, as it carries important prognostic information in predicting future hypertension.

**Study of Pro-Inflammatory Markers (TNF-alpha and IL6) and Oxidative Stress in Hypertensive Patients**

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**Introduction & Background:** Hypertension is one of the major global health problems. The global prevalence of the hypertension has been predicted to increase to 1.56 billion by 2025. Experimental evidences supporting direct role for endogenous proinflammatory markers and oxidative stress in mediating some of the chronic hypertensive response. We conducted a study to look into the status of inflammatory markers and oxidative stress in hypertensive patients.

**Patient Material and Methods:** Study included 40 hypertensive patients as cases and 20 normotensive non-diabetics as controls. Levels of Interleukin -6(IL-6) and Tumour necrosis factor-α(TNF-α), oxidants (Malondialdehyde, Protein carboxyl) and antioxidant (vitamin C, Superoxide Dismutase) along was measured using the standardised ELISA kits and protocol.

**Observation:** Serum levels of TNF-alpha and IL-6 and oxidants (Malondialdehyde, Protein carboxyl) were significantly higher in patients with essential hypertension than those in normotensive control group while level of antioxidants (vitamin C, Superoxide Dismutase) were decreased.

**Conclusions:** From our study, it is clear that there is an apparent increase in the levels of oxidants, proinflammatory markers(TNF-alpha and IL-6) and decrease in the levels of antioxidants in the cases of hypertension. Whereas in the controls, there is lower levels of oxidants, proinflammatory markers and higher levels of antioxidants. In future therapies targeting these inflammatory mediators could prove effective in the treatment or even prevention of this modern day epidemic patients.
Comparison of Oxidative Stress and Telomere Dysfunction in Hypertensive Patients (A Case Control Study)

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**Background/Objective:** Oxidative stress is the unifying patho-physiological mechanism responsible for ageing and age related diseases like diabetes, hypertension, atherosclerosis etc. Oxidative stress is defined as increase in the intracellular concentration of reactive oxygen species. Telomeres are specialized DNA-protein structures located at the ends of eukaryotic chromosomes whose length is progressively reduced in most somatic cells during ageing. Insulin resistance and oxidative stress are associated with accelerated telomere attrition, implicated in the biology of ageing/in-ageing related disorders including hypertension. We hypothesized, higher oxidative stress, measured by Melon-dialdehyde(MDA) and Glutathione-S transferase(GST) associated with telomere dysfunction in hypertensive patients. So, a case control study was undertaken, to study the dysfunction of telomere in these patients.

**Methods:** The study was conducted at a tertiary care hospital in Delhi, India, includes 40 hypertensive male patients(aged 45-65 years) and equal number of age matched healthy controls. We performed biophysical parameters and routine and special investigations, measurement of MDA levels (Okawa method), GST levels (Mozer method). In all subjects, telomere length was measured by real time PCR from the DNA isolated from leucocytes (Cawthon’s method) and telomerase activity was measured by measuring hTERT mRNA expression by RT-PCR, Taqman methodology from leucocytes.

**Results:** It was observed that the mean MDA level in cases and controls were 0.90±0.30, and 0.65±0.18 respectively (p, 0.01). The mean GST level in cases and controls were found to be 0.68±0.17 and 1.02±0.32 μmol/ml/min respectively (p, 0.001). We also found that mean telomere length was found to be shorter in hypertensive patients (8.17±1.26 kb) as compared to controls (10.47±1.79 kb) respectively (p<0.001). The expression of hTERT (mean Act ratio) of cases (-0.18) was higher as compared to control (16.17).

**Conclusion:** It was observed that there was a significant shortening of telomere length with higher oxidative stress in hypertensive patients as compared to healthy control.

Clustering of Cardiovascular Risk Factors in Subjects with Prehypertension

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**Background:** Hypertension is a risk factor for cardiovascular diseases including coronary artery disease. Recently, even prehypertension has been associated with metabolic and atherosclerotic alterations. This category was suggested due to evidence indicating that overall cardiovascular risk and end-organ damage were already elevated in individuals with prehypertension, when compared with those with a BP less than 120/80 mmHg. However, there is no specific study from India on prevalence of various cardiovascular risk factors in adult subjects with prehypertension.

**Aims:** The present study aimed to study the prevalence of various cardiovascular risk factors in prehypertensive individuals aged ≥18 years

**Methodology:** One hundred subjects in the prehypertension group formed the study population. Cardiovascular risk factors were studied viz. Obesity (BMI), Central obesity (Waist circumference), Dysglycemia, Dyslipidemia, Smoking, Alcohol intake, Family history of hypertension, Lifestyle/ physical activities and Stress/ mental health status. Clustering of risk factors was defined as presence of two or more cardiovascular risk factors in any single individual.

**Results:** Elevated waist circumference was observed in 79% of prehypertensive subjects. Prehypertensive subjects had prevalence of 75% of overweight/obesity, dyslipidemia (55%), dysglycemia (57%), sedentary lifestyle (45%), mental stress (35%). Implying that prehypertensive group is prone to cardiovascular disease. Low HDL-cholesterol (High density lipoprotein) was the most common lipid fraction derangement witnessed in the prehypertensive (48%), 99% in the prehypertensive group had at least one deranged cardiovascular risk factor. Clustering of ≥ 3 risk factors was seen in 83% of prehypertensive individuals.

**Conclusion:** Waist circumference and body mass index are significantly elevated in prehypertensive population as compared to normotensive population. Notably, all components of metabolic syndrome viz. dysglycemia, dyslipidemia, obesity and central obesity seem to be clustered in prehypertensive population suggesting the presence of a spectrum of metabolic abnormalities concentrating in prehypertensive subjects of the present study. The presence of multiple risk factors in prehypertension subjects stresses on the need for early detection of these patients. Preventive strategies should be targeted at this population subset so that progression to hypertension can be prevented and cardiovascular risk mitigated.

Infectious Diseases

**IPF (Immature Platelet Fraction) predicts platelet recovery in Dengue fever patients**

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**Introduction:** Rapidly decreasing platelet count can be a complication of many known diseases worldwide. The common causes in our country include fever of infectious origin like viral, bacterial, parasitological. Treating Thrombocytopenia requires continuous evaluation of various parameters. IPF (Immature Platelet Fraction), a quantification of reticulated platelet count is one such parameter. We aimed here to evaluate predicting the outcome of patients with Dengue fever.

**Materials:** A total of 26 patients suffering from Dengue fever studied. Patients with Dengue serology either NS1Ag or IgM antibody positive and platelet count <1,50,000/cmm and falling platelet trend were included. Patients with only IgG antibody positive without IgM or NS1Ag positivity and normal platelet count were excluded. In all 26 patients as soon as diagnosis of Dengue fever confirmed, IPF value and platelet count were monitored using automated cell counter XN-1000/XT 4000i daily or as and when required basis.

**Observation:** Out of 26 patients 6 had platelet count falling trend up to 1,00,000/cmm, 8 had up to 50,000/cmm, 1 had up to 30,000/cmm, 10 had up to 10,000/cmm and 1 had <10,000/cmm. Analysis of IPF and platelet count in 26 patients showed that in all patients there is inverse relationship with IPF and platelet count. In all patients recovery of platelet count started within 24 to 48 hours after peak IPF value observed.

**Conclusion:** IPF is a potential tool for predicting platelet recovery in Dengue fever patients having low platelet count. Platelet transfusion therapy to be avoided in patients of Dengue fever as far as IPF is rising. In the era of increasing awareness, widespread use of internet, patients and relatives express concern over platelet count, sometimes unnecessarily force doctors to transfuse platelets. In such circumstances this is a vital parameter to counter their concern.

**Clinical and biochemical predictors of mortality in Japanese Encephalitis- a 3 year study**

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**Introduction:** JE (Japanese Encephalitis) is a mosquito-borne viral infection of the central nervous system, commonly affecting the population in the North-Eastern parts of India. It is associated with a wide variety of neurological features such as seizures,
paralysis and altered mentation and carries a mortality rate of about 30%. The study was conducted to assess the significance of these presenting clinical features and biochemical parameters in predicting the mortality of JE patients.

Materials: Over a period of 3 years, from 2013 to 2015, a total of 83 patients were confirmed as having JE, using CSF and serum samples. History, physical examination and laboratory findings were recorded in all cases. The cases were followed up for 1 year regarding mortality.

Observations: Out of 83 patients, mortality data of 72 patients could be followed up for 1 year regarding mortality. The mean duration of symptoms before presentation was 5 days. The parameters of Seizures, GCS< 8 and hyponatremia, were present in 70%, 65% and 55% of expired patients respectively. Statistical analysis was carried out using Pearson χ² testing and suggested significant correlation with mortality (p<0.005) in patients having any of these three abnormalities. In patients with the presence of all three features mortality was 98%.

Conclusions: The parameters of seizures, GCS<8 and hyponatremia are strong predictors of mortality in patients of JE, individually or together. Presence of any of these findings should alert the clinician to an increased likelihood of death in such patients, and the need of prompt corrective measures.

A Study of Clinical & Bronchoscopic Evaluation of Patients Presenting with Hemoptysis with Emphasis on Tuberculosis

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Introduction: Pulmonary tuberculosis is the leading cause of hemoptysis in India. But diagnosis is often delayed as fewer than half have positive sputum smear (29–39%) with poor sensitivity (30–70%) than cultures (80–85%). To treat sputum smear negative TB is usually depend mainly clinically, but 20% of patients are asymptomatic whereas 42–86% of may have nonspecific symptoms. The introduction of CB-NAAT/LPA in TB with MDR-TB detection has revolutionised the diagnosis as it could readily diagnose with sensitivity and specificity of about 80% and 98% respectively in BAL.

Material: This is an observational study for duration of one year. All patients presenting with hemoptysis were evaluated clinically and Broncho Alveolar Lavage were taken for microbiological testing, Cartridge Based Nucleic Acid Amplification Test (CB NAAT) or Line Probe Assay (LPA), for Tubercular etiology.

Observation: Out of total 34 patients who had at least two sputum smear negative for AFB having hemoptysis and underwent bronchoscopy and BAL examination, 11/34 (32%) patients were confirmed by smear for CB-NAAT or LPA for Tuberculosis of which 4 had sensitive and 3 had resistance for Rifampicin, 3 had sensitive and 5 had resistance for Isoniazide. 3/34 (9%) patients had BAL smear positive for AFB. 3/34 (9%) patients had chest X ray suggestive for Tuberculosis but none were positive microbiologically and 5/34 (14%) patients had CT scan Thorax suggestive for Tuberculosis of which 2/5 (40%) patients were confirmed by microbiological tests. Among others, 7/34 (20%) had pneumonia, 2/34 (6%) had lung abscess, 3/34 (9%) had bronchogenic carcinoma, 4/34 (12%) had bronchiectasis, 1/34 (3%) had foreign body aspiration.

Conclusion: Our study showed high diagnostic yield of BAL examination including primary MDR-TB. Culture and DST methods require prolonged time for growth and detection of MDR-TB during which patients may be inappropriately treated, MDR strains may continue to spread, and amplification of resistance may occur. Early and rapid diagnosis with high sensitivity and drug resistance from BAL for CB-NAAT/LPA will therefore have optimum benefits for patient and public health, including better prognosis, increased survival, prevention of acquisition of further drug resistance, and reduced spread of MDR strains to vulnerable populations.

Conservative versus Invasive Management of Acute Pyelonephritis: An Analysis from a Tertiary Care Center

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Background: The incidence of acute pyelonephritis is increasing & seen even in immunocompetent individuals. Early interventions with specific indications have changed the outcome of acute pyelonephritis.

Objectives: The study was done to analyze the hospitalization outcomes in acute pyelonephritis with regard to intervention and conservative treatment.

Material & Methods: All patients with CT scan proven pyelonephritis were included in the study which was done from october 2015 to march 2016 (n=30). Baseline investigations along with periodic monitoring was done.

Results: Majority of the patients were in the age group of 40 to 70 years (n=23). 28 patients were diabetics, 10 patients had systemic hypertension and 4 patients had renal calculi. CT showed bilateral involvement in 14 patients and unilateral involvement in 16 patients with left predominance. 9 patients had normal creatinine at the time of admission. Creatinine levels above 3mg/dl was seen in 8 patients. Early intervention was done for patients with perinephric collection and features of obstruction (15 patients underwent DJ stenting, TURP was done in 1 patient and percutaneous nephrostomy in 1 patient). Blood cultures were positive in 9 patients and urine cultures were positive in 8 patients. Except for one patient all others had ESBL (extended spectrum betalactamase) organisms, the predominant organism being Escherichia coli. 22 patients required intensive care and only 4 patients had an ICU stay of more than 7 days. 1 out of 30 patients died.

Conclusion: Acute pyelonephritis requires a high index of suspicion for diagnosis. Early imaging along with intervention improves the outcome. The predictors of outcome were age and severity of CT findings.

A 10 Year Case Series on Genitourinary Melioidosis

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Introduction: Melioidosis is an infectious disease caused by Burkholderia pseudomallei, predominantly seen in tropical regions. The common presentations of melioidosis include pneumonia, septic arthritis, osteomyelitis, and fulminant sepsis. The genitourinary manifestations of melioidosis have not been studied in detail hence there is little awareness regarding the same among practicing clinicians. Genitourinary melioidosis can present as pyelonephritis, prostatic abscesses, epididymo-orchitis and renal abscesses. Hence inspite of numerous cases with melioidosis being reported in Southern India, the lack of awareness hinders the identification of bacteria and its treatment, leading to increased mortality.

Material: This is an retrospective observational study to measure the prevalence of genitourinary melioidosis in patients in a tertiary care center in South India. The parameters assessed were different clinical manifestations, risk factors and outcomes. The data were collected from discharge summaries and culture positive records of the patients admitted under medicine department for 10 years from year 2006 till 2016.

Observation: There were a total of 16 patients admitted over 10 years who were diagnosed to have genitourinary melioidosis with cultures and imaging favouring the diagnosis. All the patients enrolled were middle aged men with average age group of 55 years. All the patients who were admitted most of them had a chronic illness, requiring a hospital stay of 3 to 4 weeks. Among the patients admitted fifty per cent had lower urinary tract symptoms and urine leucocytosis was seen in around 43.7 percent. Diabetes mellitus is an important risk factor which was found in almost fifty percent of the and a mean glycosolated hemoglobin of 8.37. Only twenty five percent of patients
had a history of alcohol use.

The diagnosis was made by cultures (blood, urine, tissue) being positive for burkholderia pseudomallei and imaging suggestive of concomitant genitourinary involvement. Of the total patients, there were equal numbers of blood culture and urine culture being positive. Of the culture positive patients, two of the sixteen patients had both urine and blood culture being positive with imaging supporting the diagnosis. There were eleven patients with either prostatic or renal abscesses and maintenance of sixty percent were culture positive for burkholderia, with 5 patients being both blood and tissue culture positive. Forty four percent of patients had isolated genitourinary melioidosis without bacteremia. In those with disseminated disease 31.25 percent had bacteremia and around 12.5 percent did not have bacteremia.

Among the patients enrolled 25 percent had burkholderia pseudomallei resistant to ciprofloxacine and about 31 percent were resistant to aminoglycosides. There was no resistance detected to carbapenem, ceftazidime and piperacillin tazobactum.

Imaging was one of the modality for the diagnosis of genitourinary melioidosis. Of the patients admitted there were about 18 percent with renal abscesses, 43.7 percent having a prostatic abscess. 12.5 percent of patients with atypical genitourinary presentation had seminal vesicles abscess and cystitis. Of the total only 2 patients required surgical intervention for the abscess, and the rest were treated medically.

57 percent of patients had disseminated melioidosis, of which 5 patients had septicemia with 2 having acute kidney injury not requiring hemodialysis. At the time of discharge their renal functions were within normal limits.

As per guidelines the first line of therapy is cefazidime. All the patient received cefazidime for 2 weeks followed by maintenance with either septran DS and doxycycline.

Acute worsening was seen in one patient during the maintenance phase who required readmission and a repeat course of injection ceftazidime.

There was no mortality noted in the patient with genitourinary melioidosis.

Conclusion: Genitourinary melioidosis was found to be a male predominant disease with a chronic course and no associated mortality.

A Clinical Study of Enteric Fever in Hospitalised Patients
M. Niharika, G. Eswar
Dr Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation

Background: Enteric fever is the common infectious disease in developing countries. Clinical features, lab investigations, antibiotic sensitivity and resistance pattern of enteric fever were analysed in the present study.

Methods: Prospective observational study was conducted between august 2015 to july 2016 at a tertiary care hospital.

Results: A total of one hundred and two patients with blood culture positive enteric fever to culture positive for typhoid were included in the present study. Mean age (+/-SD) of the patients was 29.9 +/- 11.1 years,eighty one patients were males. Fever (100%) was the most common presenting feature. Other common symptoms were headache (72.5%), myalgias (72.5%) and anorexia (44.1%). 10% cases presented with fever of more than four weeks duration. Relative bradycardia was present in 42.3% and coated tongue in 22.5% patients. Hepatosplenomegaly was found in 99.3% of patients.

Conclusion: Present study shows an increasing resistance to fluoroquinolones which is the most common drug used for enteric fever at primary care. So rational use of antibiotic is indicated to prevent the emergence of drug resistance to other classes of drugs.

Predictors of Severe Leptospirosis
Sinvu RV, Vishnu RS, Elizabeth Jacob
Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum

Introduction: Leptospirosis is a major public health concern in Kerala and in other parts of India. Severe manifestations of the disease are estimated to occur in 60% of all human infections in kerala and factors associated with these forms are poorly understood. Study was conducted to find out predictors of severe leptospirosis and to find a relation between early findings and late complications, so that early recognition of those who can develop complication is possible. Also to describe preference of organ involvement, whether kidney, liver, lung heart or brain is most commonly involved in our setting.

Study Method: Mild leptospirosis are patient with acute febrile illness has no complications. Severe leptospirosis: patient has acute febrile illness with any of the complications like 1) jaundice, 2) acute kidney injury, 3) pulmonary hemorrhage, 4) ARDS, 5) neuroleptospirosis, 6) hypotension, 7) thrombocytopenia, 8) myocarditis, 9) ocular complications, 10) hypokalemic paralysis Predictors studied are age, sex, occupation, clinical features

Study population are selected with interviewer operated proforma having clinical assessment and laboratory data after obtaining written informed consent.

Data will be entered in exel and analysed in IBM SPSS Version 20. Patients with severe or fatal leptospirosis determined by clinical criteria were compared with milder leptospirosis using multivariate logistic regression to identify the predictors of poor outcome. Table 1, 2 and charts 1, 2 showing study results.

Conclusion: In our study it was found that total count of more then 130000,thrombocytopenia less than 50000, granular casts and pus cells in urine and old age can predict severe leptospirosis.

A Prospective Clinical Study on the Use of Reverse Transcription - Polymerase Chain Reaction for the Diagnosis of Dengue Fever
Sai Malavika Iska, Shashidhara KC, Sumanth K
JSS Medical College and Hospital, Mysore

Introduction: Dengue infection is an emerging endemic serious public health problem globally & in India since the nineteenth century. Dengue hemorrhagic fever (DHF) has become endemic in various parts of India since 1987, with the first major widespread epidemics occurring in 1996. Several studies have shown RT-PCR was the most sensitive and specific diagnostic method during the first 3 days of fever. As dengue RT-PCR requires skilled personnel, sophisticated equipments, time consuming and high cost it is not being used as often as other methods. So we compared Dengue NS1 and IgM antibody detection by ICT which is commonly used to diagnose dengue fever with RT-PCR which is rarely used.

Materials & Methods: The study was carried out in our Hospital. The study was designated as an observational study with 70 patients of Strongly clinically suspected dengue fever with thrombocytopenia and 30 patients with dengue like infection with negative NS1antigen and serology excluding patients with malaria, leptospirosis, scrub typhus, influenza, CMV formed the source data for this study. Individuals aged above 18 years of age was assessed and a detailed history and a thorough clinical examination was done. Serum sample was collected from all clinically suspected dengue fever patients and was analyzed for dengue NS1 antigen and IgM anti dengue antibody by ICT and the same serum sample was analyzed for RT-PCR.

Observation: Out of 100 patients with strong suspicion of dengue fever with majority of patients in age group of 21-30 years 33%, 36 were dengue NS1 positive and 25 were dengue IgM positive and 9 were both dengue NS1 and IgM positive and remaining 30 were both NS1 and IgM negative. Among 70 positive dengue patients either by dengue NS1 or by dengue IgM 18 patients were diagnosed to be dengue haemorrhagic fever and remaining 52 patients were diagnosed to be dengue fever. In our study among 36 dengue NS1
antigen alone positive patients, RT-PCR was positive in 34 patients. In other 9 patients in whom both Dengue NS1 and IgM dengue were negative, RT-PCR was positive in 8 patients, with a \( P \) value of 0.035 of dengue NS1 by ICT with RT-PCR and kappa is 0.7. Among 70 dengue positive patients either by dengue NS1 antigen or IgM dengue antibody RT-PCR was positive in 54 patients. Among 30 dengue negative patients where both NS1 and IgM were negative, RT-PCR was negative in all 30 patients. The positive and negative predictive value is 77.14\% and 100\%. There was statistical significant correlation of dengue NS1 when combined with IgM (\( p \) value is 0.001) with RT-PCR and there was strong adjustment between dengue NS1 when compared with IgM with RT-PCR (kappa is 0.67).

**Conclusion:** As there is a need to develop rapid laboratory diagnostic tools that will allow for early and accurate diagnosis of DF and DHF we compared the commonly used diagnostic tools and we found the sensitivity of Dengue NS1 antigen when combined with dengue IgM antibody was as high as RT-PCR and but the specificity is low when compared to RT-PCR. With this we conclude Dengue NS1 antigen along with dengue IgM by ICT along with proper history and examination of the patient which are cost effective and need less time to perform can be regularly used for the diagnosis of dengue fever. RT-PCR which is not cost effective and requires skilled personnel, sophisticated equipments, can be used to confirm the diagnosis and to differentiate from other febrile illnesses during the acute phase of fever and is not a choice of diagnostic tool for confirmation of dengue fever once there is development of IgM antibodies in the serum. We conclude early diagnosis and treatment of dengue fever and dengue hemorrhagic fever helps to avert complications until the lab reports are available.

**The clinicoradiological profile and outcome of H1N1 infected patients at tertiary care centre- a descriptive study**

**Mohamed Sanowfer, Mathew Thomas, Suresh Kumar V K**

Kerala Institute of Medical Science, Trivandrum

**Introduction:** This study aims to assess the clinical and radiological profile, factors determining the response, and outcome in H1N1 positive patients.

**Materials and Method:** This was a retrospective observational study done in a group of patients with H1N1 influenza infection confirmed by throat swab RT-PCR in KIMS hospital, Trivandrum, Kerala. The duration of the study was 1 year from January 2015 to December 2015. The details of patients who were found to be positive for H1N1 influenza infection during the stipulated period of study were collected from the hospital records. Basic epidemiological data, initial clinical presentation, investigation findings, details of hospital stay, complications, need for mechanical ventilation and outcome were documented for each case. The data were analysed using appropriate statistical tests.

**Observation:** During the period of study there were 323 suspected cases of influenza of which 87 turned out to be positive for H1N1. It was found to be more common in age group 15-60 years i.e. 61 patients(70%). Majority were females-50(57.4%), 54(62%) patients had risk factors like asthma 18(20%), DM 17(20.5%), Pregnancy 9(10.3%) and smoking 6(6.8%).

**The common presenting symptoms were fever 82(94.2%), cough 76(87.3%), breathlessness 52(59.7%), myalgia 30(34.4%), rhinitis 30(34.4%), sore throat 13(14.9%) & loose stools 8(9.1%).**

53 patients had radiological evidence of infiltrates with bilateral involvement in 44 patients (83\%). Increased risk of developing pneumonia was seen in patients with delay in starting treatment (56\%), asthma (20\%), DM (20.5\%), smoking (6.8\%) and immunosuppression (5.9%).

Among the 87 patients 44(50.5\%) were admitted in ICU. 38 (43\%) patients required mechanical ventilation of which 20 (22.9\%) had non invasive and 18 (20.6\%) had invasive ventilation.

Among 43 patients with pneumonia 14(16.6\%) had ARDS, 10(11.4\%) had leukopenia, 5(5.7\%) 10(11.4\%) patients died. Cause of death was sepsis in 6 (6.8\%) and ARDS in 4(4.5\%) patients.

**Conclusion:** 87 patients were confirmed to have H1N1 influenza. 10 patients died, 6 had Sepsis and 4 had ARDS. 53 patients had pulmonary infiltrates. 38 patients needed ventilatory support, 20 non invasive and 18 invasive. Delay in starting treatment (30 patients) was found to be a major risk factor for the development of pneumonia.

**Role of CBNAAT in Rapid Diagnosis of Tubercular Meningitis**

**Lokesh Khandelwal, Richa Dewan, S. Anuradha, Ashwini Khanna, Peeyush Kumar, Sunny Uppal**

Maulana Azad Medical College and associated Lok Nayak Hospital, New Delhi

**Background:** TB is the most severe form of tuberculosis with a high mortality rate. Early diagnosis and treatment for TB is the best predictor of survival. CBNAAT is a rapid molecular real time PCR test and can give results for TB and rifampicin resistance in 2 hours. Role of CBNAAT in early diagnosis of TB is not established yet.

**Aims:** To compare the efficacy of CSF microscopy, CBNAAT and CSF culture in detection of *Mycobacterium tuberculosis* in patients suspected of having TBM.

**Methods:** This analytical cross-sectional study included 50 suspected TBM patients who fulfilled the eligibility criteria. All patients underwent detailed clinical examination, radiological imaging and CSF analysis which included AFB microscopy, culture, CBNAAT and routine investigations.

**Results:** The mean age group of the study population was 33.8 ± 15.2 years, with 30 (60\%) females and 20 (40\%) males. VI cranial nerve was the most common cranial nerve involved in 11 (22\%) cases. Mean total leucocyte count in CSF was 158.8 ± 160.9 cells/mm\(^3\). Mean sugar, protein and ADA levels in CSF were 54.7 ± 25.7 mg/dl, 191.2 ± 87.8 mg/dl and 9.3 ± 3.67 IU/L respectively. Chest X-ray showed miliary shadows in 16\% cases, NCCT-head showed communicating hydrocephalus in 28\% cases and 54\% had evidence of tuberculosis outside CNS.

AFB was identified on microscopy in 1 (2\%), by CBNAAT in 19 (38\%) and by culture in 14 (28\%) cases. Both CBNAAT and culture were significantly better in detection of AFB as compared to microscopy (\( p \) value < 0.001). CBNAAT increased AFB detection by 10\% as compared to culture but the difference was not statistically significant (\( p \) value > 0.05). 2 cases of rifampicin resistance were identified by CBNAAT and only 1 by culture. CBNAAT detected AFB in 2 hours along with rifampicin resistance. It enabled early initiation of treatment for MDR-TBM in these 2 cases.

**Conclusion:** CBNAAT in CSF of suspected tubercular meningitis cases is recommended for early definitive diagnosis as well as initiation of treatment for MDR-TBM in those with rifampicin resistance.

**Study to determine the cardiac manifestations in HIV infected patients and their correlation with CD4 counts**

**Shaheer V K, Jeetendra J M, Satyanarayana ESIC PGIMSR**

**Introduction:** Acquired Immunodeficiency Syndrome (AIDS) caused by infection with human immunodeficiency virus (HIV) is characterized by profound immunosuppression that predisposes a patient to wide array of opportunistic infections, malignant neoplasm and multi-organ dysfunction. Studies have suggested that HIV may exhibit a cardiac tropism and cardiac disease associated with HIV may be multifactorial, and can be caused by infectious or neoplastic complications or their treatments or by HIV infection of the myocardium itself. The number of people living with HIV is on the rise secondary to the advent of highly active antiretroviral agents, which have greatly reduced morbidity and mortality associated with HIV infection. Increased life span of infected individuals on HAART has led to an increased incidence of cardiovascular complications, which were often unrecognized in the early days. The relation of CD4+ T cell count is also important as it correlate with severity of cardiac involvement. The present study is to detect occurrence of cardiac involvement in HIV/AIDS cases and their correlation with CD4+T cell count.
Materials: The case controlled study conducted at ESIC PGIMSR, Bangalore. Total of 115 HIV-positive cases and 60 healthy control subjects were recruited for the study. The cases comprised 44 females (38.0%) and 71 males (62.0%), while the controls included 5 females (17.0%) and 35 males (62.0%). All patients were subjected to investigations like cd4 count, Hb, TLC, LDP, platelets, serum urea & creatinine, lipid profile, x-ray chest pa view, ecg, transthoracic echocardiography.

Observation: The CD4 count ranged from 17.00 to 800.0/µl with a mean of 200.37 ± 160.4/µl. Echocardiographic abnormalities were found in 63% of the cases overall compared with 6% in the controls. HIV-positive patients had significantly increased IVST, LVVPWT and LVMI compared with the controls. LVVPWT and IVST was higher in the cases. RA diameter and RV dimension WERE also increased.

Of the 115 cases studied, 18 (15.65%) had pericardial effusion, 40 (34.78%) had pericardial effusion, 16 (14%) of pulmonary artery hypertension, 17 (15%) of mitral valve prolapsed and 25 (22%) have reduced ejection fraction compared with none of controls. 54 (47%) cases have diastolic dysfunction of sputum negative pulmonary tuberculosis. It also helps in the early detection of rifampicin resistance. Sputum smear positivity without CBNAAT positivity may indicate the presence of atypical mycobacterium.

Conclusion: CBNAAT are a very simple and useful tool in the detection of pulmonary tuberculosis specifically in sputum negative pulmonary tuberculosis. CBNAAT is a novel integrated diagnostic device

The Utility of Cartridge Based Nucleic Acid Amplification Test in the Diagnosis of Pulmonary Tuberculosis
Suman Talukdar, Swaroop K Baruah
Gauhati Medical College

Background: Mycobacterium tuberculosis remains as one of the most significant causes of death from an infectious agent. Rapid diagnosis of tuberculosis and detection of Rifampicin (RIF) resistance is essential for effective disease management. CBNAAT(Cartridge based nucleic acid amplification test) or GeneXpert MTB/RIF assay is a novel integrated diagnostic device for the diagnosis of tuberculosis and rapid detection of Rifampicin resistance.

Aim of the Study:
1. To assess the diagnostic usefulness of CBNAAT in Pulmonary Tuberculosis
2. To determine the usefulness of CBNAAT in the detection of Rifampicin resistance in New Sputum Smear Positive cases.

Materials and Methods: This is an observational study conducted in the Department of Internal Medicine at Gauhati Medical College Hospital and LGB TB Hospital, Guwahati between Jan 2014 to Dec 2014.

Results: 2171 TB suspects were taken up in the study out of which 378 (17.41%) were sputum positive and 1793 (82.58%) was sputum negative. 650 patients were CBNAAT positive of which 363 were CBNAAT positive sputum positive cases and 146 were CBNAAT positive sputum negative patients, i.e. 8.14% of sputum negative cases were CBNAAT positive. Rifampicin resistance was detected in 18 new cases, i.e. cases were sputum positive but CBNAAT negative.

Conclusion: CBNAAT is a very simple and useful tool in the detection of pulmonary tuberculosis specifically in sputum negative pulmonary tuberculosis. This can be attributed to the disease itself or even as the adverse effects of certain antiretroviral agents. Physician need to be aware of the high mortality (16.6%).

Predic tors of outcome in patients with leptospirosis with Acute kidney injury
Iliaz Attar, Venugopala D
Kasturba medical college, Mangalore

Introduction: Leptospirosis is an emerging spirochete zoonosis worldwide. Leptospirosis is a fatal zoonosis causing acute kidney and liver injury leading to increased morbidity and mortality. The aim of this study was to come up with a set of clinical and laboratory parameters which can predict the outcome of patients with leptospirosis with acute kidney injury.

Methods: This is a hospital based cross sectional study of leptospirosis positive patients with acute kidney injury who were admitted in tertiary care center. The study was conducted in 2015-16, over a period of 11 month (September to augst.)

Results: Out of total 60 patients there were 45 males and 15 females, with mean age of 36 years. Maximum incidence of cases was found in month of July and August. Out of total 60 patients, 20(34.9%) were farmers and 11 (18.6%) were labourers, 13 (22.1%) were housewife, 14 (24.4%) were others. All 60 had positive results for IgM against leptospira and had acute kidney injury. Out of 60 patients 30 had oliguria, 13 had hypertonia(<90/60), 8 patients had petichiae, 5 patients had haemoptysis, 12 patients had platelet count<20,000, 18 had serum potassium>5.0, and 36 patients had serum amylase>400IU. 16 patients showed eeg changes suggestive of myocarditis.16 patients required dialysis and total of 12 out of 60 patients expired.

Conclusion: Patients at initial presentation with hypertonia, oliguria, low platelets<20,000, high amylase(>400IU) and with eeg changes have poor outcome.
Pulmonary Sequale in Treated Swine Flu Patients Without Prevoius History of Lung Disease - A Stop Beyond the Full Stop

Siva Raman, Maniram Kumhar, Manoj Mali, Ekant Budhwani, Ramesh Bishnoi
JLN Medical College, Ajmer

Objectives: To assess the pulmonary sequelae on follow up of patients of swine flu after treatment who had no underlying respiratory disease previously.

Methods: This is a prospective study conducted in 50 symptomatic patients attended medicine OPD, who were diagnosed and took treatment for swine flu previously. They were assessed clinically, with PFT, radiologically and with other relevant investigations. With these parameters we assessed the long term sequelae after swine flu attack.

Results: Of 50 patients, females predominance was noted, female : male ratio was 32:18. The mean age group taken for the study was 40 years, more commonly younger age group patients were reported. The most commonest symptom reported by the patients were dry cough (72%), breathlessness (60%), chest tightness (28%) and chest pain (20%). The spirometric results were restrictive pattern seen in 16 patients (62%), obstructive pattern seen in 6 patients (23%), mixed pattern seen in 4 patients (15%). DLOCO done in patients with abnormal spirometry findings (26 patients), 14(54%) patients had normal diffusion function, 8 (31%) patients with mild reduction, 4 (15%) patients with moderate reduction. HRCT pattern out of 50 patients, 4 (12.5%) patients showed ILD (3 NSIP and 1 UIP), 12 (37.5%) patients showed GGO, 6 (18.5%) patients showed consolidation patch and 10 (31.5%) patients showed only centrilobular nodules.

Conclusion: Our study stresses the importance of complete workup and follow up of swine flu recovered patients rather than treating them symptomatically at the disease outset as they are more prone for more pulmonary complications later on.

Nephrology

Clinical Microbiological profile and outcome of Peritonitis in Peritoneal Dialysis patients in Southern Railway
Radha Vijayaraghavan, Kalandidi A
Southern Railway Headquarters Hospital, Perambur

Introduction: Peritonitis is the leading cause of technique failure in CAPD and significantly contributes to morbidity and mortality. This study was undertaken to understand clinical, microbiologic pattern and outcome of peritonitis in Southern Railway patients.

Methods: This study was a single centre, retrospective, observational cohort study of all peritonitis episodes during January 2013 to December 2015. CKD patients on CAPD with peritonitis attending Railway Hospital, Perambur were studied. Detailed history taking, clinical examination, CAPD fluid analysis was done along with other relevant investigations. All patients were treated with empirical antibiotics as per the existing protocol and later modified as per the microbiology report. Outcome was studied, results were statistically analysed.

Observation: 46 patients with CAPD peritonitis were enrolled Total number of peritonitis episodes was 91. 60.9% of patients were diabetics, 91.60% patients had hypoalbuminemia. Microbiologic profile is tabulated below:

<table>
<thead>
<tr>
<th>Organism</th>
<th>Antibiotic sensitivity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methicillin resistant</td>
<td>Vancomycin sensitive</td>
<td>25.28%</td>
</tr>
<tr>
<td>Coagulase Negative</td>
<td>Oxacillin sensitive</td>
<td>16.48%</td>
</tr>
<tr>
<td>Staphylococcus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methicillin sensitive</td>
<td>Vancomycin sensitive</td>
<td>13.18%</td>
</tr>
<tr>
<td>Coagulase Negative</td>
<td>Oxacillin sensitive</td>
<td>13.19%</td>
</tr>
<tr>
<td>Staphylococcus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture negative</td>
<td></td>
<td>18.68%</td>
</tr>
<tr>
<td>Methicillin resistant</td>
<td>Vancomycin sensitive</td>
<td>13.18%</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>Oxacillin sensitive</td>
<td>5.49%</td>
</tr>
<tr>
<td>Pseudomonas</td>
<td>Aminoglycoside sensitive</td>
<td>4.4%</td>
</tr>
<tr>
<td>Aegerinosa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Gram Negative</td>
<td>Aminoglycoside sensitive</td>
<td>4.4%</td>
</tr>
<tr>
<td>Bacilli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candida</td>
<td></td>
<td>1.1%</td>
</tr>
<tr>
<td>Mycobacterium</td>
<td>Vancomycin sensitive</td>
<td></td>
</tr>
<tr>
<td>tuberculosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterococci</td>
<td>Vancomycin sensitive</td>
<td></td>
</tr>
<tr>
<td>Corynebacterium jejeki</td>
<td>Oxacillin sensitive</td>
<td></td>
</tr>
</tbody>
</table>

Study of outcome revealed resolution of peritonitis in 79.12%, refractoriness to therapy in 20.88%. Of these patients, 89.48% had to be switched to Haemodialysis and mortality was seen in 10.87% patients.

Conclusion: Staphylococcus was the major pathogen causing peritonitis in this study. Methicillin resistant strains were predominant. Peritonitis due to methicillin resistant strains was the leading cause of technique failure and death. Sensitivity to Vancomycin and Amikacin retained and hence recommended as first line therapy in our patients.

To study the prevalence and pattern of organisms in urine culture in admitted patients
Arisht Jain, R Giri, Rk Verma, JS Kushwaha, S Govil
GSVM Medical College, Kanpur

Methods: 200 consecutively admitted patients were selected from medicine wards from 25th February 2016 to 28th February 2016 and their urine was collected from midstream urine sample from conscious patients or from urethral foley catheter on insertion for unconscious patients. Their urine was examined for growth of micro organisms on CLED medium and subsequent cultures were done on Mueller Hinton agar and sensitivity was tested using disc method.

Results: Average age of patients was 49 years of which 41% patients were females and 35% patients were catheterized. 30% of patients with positive urine culture were aged above 60 years. 20% patients were previously on antibiotics. 30% patients had history of burning micturition. Of the catheterized patients 66% patients had positive urine culture and majority had E.coli growth.

33% patients had positive urine culture. 46% of positive urine cultures showed Escherichia coli, 23% showed enterococcus, 23% had fungal growth and 15% had Klebsiella. 7% patients had mixed growth.

Majority of E. coli cultures were sensitive to amikacin(66%) and carbapenems(50%). Enterococcus faecalis was found sensitive to tetracyclines(66%) and vancomycin(66%).

Conclusion: UTI is highly prevalent in admitted patients. Instrumentation of urinary tract increases the chances of UTI. Aged people were more prone to UTI. Empirical antibiotic therapy should be chosen initially but later changed to specific antibiotics according to culture reports. Drug resistant organisms are highly prevalent.

Thyroid Dysfunction- A Reality or a Biochemical Error in Patients of CKD
Kasturi Hazarika, S Verma, R Giri, V Srivastav, RK Verma
GSVM Medical College, Kanpur

Introduction: Patients with chronic renal failure often have signs & symptoms of hypothyroidism. Various studies of thyroid functions in uremic patients have been carried out which have shown conflicting results. Hyperthyroidism, Hypothyroidism & euthyroid state have all been reported in uremic patients which have shown conflicting results. Hyperthyroidism, Hypothyroidism & euthyroid state have all been reported in recent studies of thyroid functions in uremic patients which have shown conflicting results. Hyperthyroidism, Hypothyroidism & euthyroid state have all been reported in recent studies of thyroid functions in uremic patients which have shown conflicting results. Thyroid dysfunction may be involved, including alterations in hormone production, distribution and excretion.

Materials and Methods: The present study was conducted on 42 patients of chronic kidney disease, admitted in emergency department and indoor department of a tertiary hospital of north India. 40 healthy age and sex matched controls not having any evidence of CKD were also studied for valid comparison.

Observations: On comparing TSH levels between cases and controls and analyzing the data statistically, it was found that the study was no significant when controls were compared with mild, moderate and severe CKD patients. P value = .05 between controls and all CKD patients. On comparing FT3 levels between cases and controls and analyzing the data statistically, it was found that the study is significant.
thyroid dysfunction occurs both clinically and biochemically in patients with chronic renal insufficiency. For correlation between GFR levels and total T3, free T3 levels scatter diagram was used which showed greater decline in TT3,FT3 levels as GFR falls below 20. On analyzing the data statistically, correlation coefficient was significant. Hypothyroidism was diagnosed based on clinical features and decreased FT4 and raised TSH levels.

Results: From the study it was concluded that thyroid dysfunction occurs commonly in patients of CKD although it is uncommon in clinical stages but becomes progressively more common as disease advances. There is also an increased prevalence of signs and symptoms mimicking hypothyroidism in advanced CKD along with increased true prevalence of the disease. Only TSH and FT4 levels can be relied upon to diagnose and treat primary hypothyroidism. To conclude thyroid dysfunction occurs both clinically and biochemically in patients with chronic renal insufficiency.

Table/Fig-3: Table representing the percentage of subjects having altered values of trace elements

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Reference value</th>
<th>Group A [%]</th>
<th>Group B [%]</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>&lt;5.00 µg/l</td>
<td>23 [57.5]</td>
<td>40 [100]</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>&gt;5.00 µg/l</td>
<td>17 [42.5]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt;1.50 µg/l</td>
<td>33 [82.5]</td>
<td>40 [100]</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>&gt;1.50 µg/l</td>
<td>7 [17.5]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt;5.00 µg/l</td>
<td>40 [100]</td>
<td>40 [100]</td>
<td>0.877</td>
</tr>
<tr>
<td></td>
<td>&gt;5.00 µg/l</td>
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<td>0 [0]</td>
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</tr>
<tr>
<td>Lead</td>
<td>&lt;150 µg/l</td>
<td>3 [7.5]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt;30.0 µg/l</td>
<td>40 [100]</td>
<td>40 [100]</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>&gt;30.0 µg/l</td>
<td>0 [0]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>&lt;30.0 µg/l</td>
<td>40 [100]</td>
<td>40 [100]</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>&gt;30.0 µg/l</td>
<td>0 [0]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>&lt;4.00 µg/l</td>
<td>40 [100]</td>
<td>40 [100]</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>&gt;4.00 µg/l</td>
<td>0 [0]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Caesium</td>
<td>&lt;5.00 µg/l</td>
<td>40 [100]</td>
<td>40 [100]</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>&gt;5.00 µg/l</td>
<td>0 [0]</td>
<td>0 [0]</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0-340</td>
<td>36 [90]</td>
<td>40 [100]</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>&gt;340</td>
<td>4 [10]</td>
<td>0 [0]</td>
<td></td>
</tr>
</tbody>
</table>

Results: In the present study, the mean blood levels of Arsenic, Cadmium, Chromium and Cobalt was found to be significantly higher in group A as compared to group B with all these parameters attaining a p value of 0.000.

Similarly the mean blood levels of Lead and Caesium was high in group A with a p value of 0.001 each.

The blood levels of Mercury and Barium did not vary significantly between both the groups with p=0.656 and 0.096 respectively.

The blood levels of anti-oxidant Selenium was lower in group A, but did not attain statistical significance [p=0.217].

Conclusion: The mean blood levels of toxic trace elements were significantly elevated with a simultaneous reduction in essential trace elements in patients receiving haemodialysis, which probably may contribute to an increase in CVD.

Keywords: ESRD-End Stage Renal Disease, HD-Haemodialysis, CVD-Cardiovascular Disease, Endothelial Dysfunction, Inflammation.

Effect of ESRD on the Blood Levels of Trace Elements

Introduction: End Stage Renal Disease [ESRD] patients despite receiving adequate Haemodialysis [HD] develop significant risk of cardiovascular disease [CVD]. Abnormalities in levels of trace elements may potentiate vascular injury by producing sustained inflammation and endothelial dysfunction. Hence the present study was undertaken to evaluate the levels of trace elements in patients receiving HD.

Aim: To study the blood levels of Arsenic, Cadmium, Mercury, Lead, Chromium, Barium, Cobalt, Caesium and Selenium among ESRD patients undergoing Haemodialysis and compare it with healthy individuals.

Materials and methods: It is a cross-sectional, comparative study done in a tertiary care center. About 40 established ESRD patients aged above 18 years, belonging to both sexes, undergoing chronic haemodialysis for more than 6 months were enrolled as Group A [cases]. Patients who had history of smoking and occupational exposure to heavy metals were excluded from the study.

About 40 age and sex matched apparently healthy individuals attending health check-up were enrolled as Group B [controls]. Participants of this group had normal e-GFR by Modification of Diet in Renal Disease [MDRD] equation.

About 5ml of fasting venous blood sample was obtained from both groups and analyzed for trace elements.

Chi-square / Fisher’s-exact test was used for comparing ratios. A p value of <0.05 was considered statistically significant.

Methods: the study was done at department of medicine king George’s medical university. The study design was cross-sectional in which the samples were collected from 14 healthy controls and 75 type 2 diabetic patients. The diabetic cases were further grouped as; normoalbuninuria (n=23), microalbuminuria (n=36) and macroalbuminuria (n=16). The urinary levels of peristin were measured by using an enzyme-linked immunosorbent assay (Thermo scientific, Freidrick, MD, USA).

Observations: urinary peristin levels were significantly elevated in all the diabetic patients compared to the controls. The AUC values for differentiating normoalbuminuria from controls, microalbuminuria from controls & normoalbuninuria and macroalbuminuria from controls, normo and microalbuminuria were 0.910, 0.951 and 0.877 respectively. For differentiating normalbuminuria, microalbuminuria and macroalbuminuria the best selected cut-off values with optimum sensitivity, specificity combinations were 2.11, 2.74 and 7.81 respectively with predicted sensitivity & specificity of 88% & 100%, 98.1% & 66.7% and 100% & 69.9% respectively. Increased urine peristin level significantly correlated with aging, high albuminuria and decline of GFR. Therefore, urine peristin ELISA demonstrated moderate to high sensitivity and specificity for diagnosing diabetic nephropathy.

Conclusion: The study demonstrates that increased levels of peristin can be detected in the urine of the patients with type 2 diabetes before the onset of significant albuminuria. Urinary peristin excretion occurs in patients with established diabetic nephropathy and it may be used as an early marker of diabetic nephropathy.
Results: The present study included 100 smokers and 100 non smokers. The mean age of the studied patients was 39.85 ± 8.15 among smokers and 39.80 ± 7.28 among non smokers. Among smokers 49% smokers have proteinuria. Proteinuria was significantly associated with pack years among current smokers (p=0.011). Smokers with >40 pack years were found to be significantly associated with proteinuria. Among smokers 67% have high GFR. As compared to non smokers, current smokers have high GFR (mean=120.06±18.53) High GFR was significantly correlated in smokers with pack year=40 (p=0.025). The average GFR in current smokers is 120.06±18.53.

Conclusion: In our study it was found that current smokers have glomerular hyperfiltration and proteinuria as that current smokers have glomerular GFR in current smokers is 120.06±18.53. GFR was significantly correlated in smokers compared to non smokers, current smokers among current smokers (p=0.011). Smokers significantly associated with pack years smokers have proteinuria. Proteinuria was mean age of the studied patients was 3.24 mg/dl to 2.4 mg/dl and mean value was 1.944 ±0.3908 mg/dl.

In Group C, the serum Magnesium value ranged from 0.7 mg/dl to 2.4 mg/dl and mean value was 1.944 ±0.3908 mg/dl.

Table 1: Showing Karl Pearson's correlation coefficient matrix between serum magnesium, blood urea, serum creatinine, potassium, sodium and calcium levels in Group A

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Correlation Coefficient (r) and its significant values</th>
<th>Blood Urea (mg/dl)</th>
<th>Serum Creatinine (mg/dl)</th>
<th>Potassium (mEq/l)</th>
<th>Sodium (mmol/L)</th>
<th>Calcium (mg/dl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>r value</td>
<td>0.399</td>
<td>0.452*</td>
<td>0.359</td>
<td>0.131</td>
<td>-0.382**</td>
</tr>
<tr>
<td>Magnesium</td>
<td>p value</td>
<td>0.05</td>
<td>0.003</td>
<td>0.023</td>
<td>0.421</td>
<td>0.053</td>
</tr>
<tr>
<td>Blood Urea</td>
<td>r value</td>
<td>1</td>
<td>0.565*</td>
<td>0.576*</td>
<td>-0.298</td>
<td>-0.304</td>
</tr>
<tr>
<td>Creatinine</td>
<td>p value</td>
<td>0.000</td>
<td>0.000</td>
<td>0.062</td>
<td>0.057</td>
<td>0.216</td>
</tr>
<tr>
<td>Potassium</td>
<td>r value</td>
<td>-0.098</td>
<td>-0.423**</td>
<td>-0.092</td>
<td>-0.009</td>
<td>-0.122</td>
</tr>
<tr>
<td>Sodium</td>
<td>p value</td>
<td>0.000</td>
<td>0.137</td>
<td>0.006</td>
<td>0.571</td>
<td>0.454</td>
</tr>
<tr>
<td>Calcium</td>
<td>r value</td>
<td>-0.304</td>
<td>-0.216</td>
<td>-0.122</td>
<td>0.077</td>
<td>1</td>
</tr>
<tr>
<td>Calcium</td>
<td>p value</td>
<td>0.057</td>
<td>0.180</td>
<td>0.454</td>
<td>0.657</td>
<td></td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

In Group A, there was significant positive correlation coefficient found between serum magnesium level and blood urea (r = 0.309, p= 0.05), between serum magnesium level and serum creatinine level (r = 0.452, p = 0.003) and, between serum magnesium level and serum potassium level,(r =0.359, p = 0.023), while there was significant negative correlation coefficient found between serum magnesium level and serum calcium level (r = -0.382, p = 0.015). However there was no significant correlation coefficient found between serum magnesium level and serum sodium level (r = 0.131, p = 0.421).

In Group B, there was a significant positive correlation coefficient found between serum magnesium level and blood urea,( r = 0.326, p= 0.003), serum magnesium level and serum creatinine level (r = 0.316, p = 0.004) and, serum magnesium level and serum potassium level,(r =-0.341, p = 0.002), while there was significant negative correlation coefficient found between serum magnesium level and serum calcium level (r = -0.540, p = 0.000). However there was no significant correlation found between serum magnesium level and serum sodium level (r = -0.021, p = 0.855).

Conclusions:

- Hypermagnesemia was a feature of both AKI and CKD, but it is more in AKI than that in CKD. More precisely, maximum thirty six cases(90.9%) out of 40 cases, had hypermagnesemia, out of which 57.5% had levels between 2.9-3.4 mg/dl and 25% had between 2.3-2.8 mg/dl. In CKD, maximum seventy four cases(92.5%) out of 80, had hypermagnesemia, out of which 38.8% had levels between 2.9-3.4 mg/dl and 33.8% had between 2.3-2.8 mg/dl.

- There was positive correlation between serum magnesium levels and blood urea, serum magnesium and serum creatinine, and serum magnesium and serum potassium levels in AKI and CKD.

- There was negative correlation between serum magnesium and serum calcium levels in AKI(r=−0.382) and serum magnesium and serum calcium levels in CKD(r=−0.540).
Role of ACE and IL-1B Gene Polymorphisms in Erythropoietin Hyporesponsive Patients with CKD

Nitya Nand, A Deshmukh
Pt. BDS, PGIMS, ROHTAK, HARYANA

Hyporesponsive to erythropoietin is a common in CKD patients. Polymorphism of ACE and IL-1B gene and studies have shown that DD genotype and IL-1B CC genotype have lower erythropoietin requirement. This study was planned to evaluate the role of ACE and IL-1B gene polymorphisms in erythropoietin hyporesponse in CKD patients.

Methods: 50 patients of CKD were segregated into group A and B with 25 patients in each. Group A, included CKD stage III-IV patients and Group B included CKD stage V who were on regular maintenance dialysis. All patients were given erythropoietin and response was monitored using erythropoietin resistance index (ERI). Genotyping of ACE and IL-1B genes was done and serum levels of ACE and IL-1B were measured.

Results: The study group included 6 patients with diabetic nephropathy and out of these 4 had DD genotype. On comparing the effect of ACE polymorphism on ERI levels it was seen that the mean. The ERI values in DD subgroup were significantly lower (16.97±5.35, 21.88±6.25, 22.69±8.35 at 1,3 and 5 month) as compared to ID (18.16±3.39, 24.17±3.66, 32.74±9.95 and II(20.73±5.17, 27.74±7.30, 41.08±13.83) U/Kg/g/dL. In the case of IL-1B the mean ERI values were lowest in the TT subgroup (16.46±4.45, 21.96±5.77, 23.98±8.48) as compared to CC (19.49±5.62, 25.62±7.07, 33.59±12.61) and CT (18.12±4.27, 24.14±5.70, 31.89±13.83) U/Kg/g/dL. The mean serum values of ACE were in a decreasing trend i.e DD> ID> II (238.05 ± 52.46, 194.73±50.28 and 162.99±39.71 ng/ml (p<0.05). The mean serum values of IL1B in CC, CT and TT were 23.24±28.77, 18.32±16.25, 23.34±13.83 pg/ml (p=0.05).

Conclusion: D allele positively affected ACE level but there was no association between IL-1B genotype and its levels. ACE gene polymorphism has an important role in determining the response to EPO and progression of CKD. Pre- treatment screening for genotype may help in predicting the patients at risk and poor responders.

Neurology

Assessment of outcome in acute stroke using National Institute of Health Stroke Scale (NIHSS)

Burra Siva Kumar, Nageswara Rao Ch V, Ramana Murthy S V, Sreenivas S, Bhaskar D S, C, Subba Rao P L V

GSL Medical College

Introduction: Stroke is the second leading cause of death. The economical and psychological costs of stroke are enormous. Clinical examination for stroke is important despite modern non-invasive neuroimaging technologies as acute stroke therapy is time dependent. Bearing this in mind and the wide variety of conditions that can mimic stroke, various stroke scales have been devised and tested in patients presenting with stroke. Among these, National Institute of Health Stroke Scale (NIHSS) was selected and applied on patients suspected to have stroke and its effectiveness in diagnosing stroke and assessing its outcome was studied.

Material: Observational prospective study using NIHSS to diagnose (if NIHSS > 3) and assess outcome of acute stroke using it. NIHSS was applied on patients suspected to have stroke, two scores were obtained for each patient, one on admission and another at the time of discharge/referral/death.

Observations: There are statistically significant relations between NIHSS score at admission - stroke outcome and NIHSS score at discharge - duration of hospital stay.

Out of 55 patients, who were discharged home independently, 51 patients had score of 6-14 and 4 patients had score of less than 6 during admission. Out of 39 patients who were discharged home with assistance, 28 patients had score of 6-14 and 11 patients had score of more than 14 during admission. All those patients who died had their base line NIHSS score more than 14.

Out of 58 patients who stayed in hospital for 6-10 days, 38 individuals had score less than 6 and 20 patients had score of 6-14. Out of 31 patients who stayed in hospital for 11-15 days, 12 individuals had score less than 6 and 18 patients had score of 6-14.

Conclusions: NIHSS is helpful in identifying persons with stroke from those suspected to have stroke. NIHSS score on the day of admission predicts the outcome of stroke, volume of infarct in CT – SCAN, and thus prognosis of stroke.

A Study of Small volume Plasma exchange in Guillian barre syndrome patients admitted in Gandhi hospital

K Joy Mounica, P. Esther Rani, KBR Sastry
Gandhi Medical College

Introduction: Guillain barre syndrome (GBS) or acute polyradiculoneuritis is an acute, diffuse post infective disorder of nervous system involving the spinal roots, peripheral nerves and cranial nerves (occasionally). Small volume plasma exchange was found to be as efficacious as large volume plasma exchange. It is an acceptable mode of treatment in a setting of limited resources.

Materials & Methods: In this study 40 adult patients (>14 years of age) diagnosed as Guillian barre syndrome (GBS) fulfilling the Combluth criteria as modified by Asbury admitted in Gandhi hospital were treated with small volume plasma exchange.

Observations: All the 40 were studied, of which most of them were in age group 14-25 yrs — 15 patients (37%), with male to female ratio as 3:1. The most common GBS subtype was AMSAN variant. In this study 50% of patients reached peak deficit within 1 week of onset of illness, 82.5% patients by 2 weeks. 60% of patients had cranial nerve dysfunction and most common cranial nerve to be involved is seventh cranial nerve.

In patients who presented in first week the paired t-test before and after plasma exchange was 4.817, 9.881 in upper and lower limb respectively and p value is 0.0001 indicating the improvement in power is significant. In patients who presented in second week paired t-test is 3.734 & 6.492 in upper and lower limb respectively. The p value 0.003 & 0.000 which is significant. In patients who presented late in third week, paired t test value is 1.0 & 1.96 in upper limb and lower limb respectively. The p value is 0.356 & 0.0096 in upper and lower limb respectively which is statistically not significant.

Conclusion: Small volume plasma exchange is most beneficial when initiated within two weeks of onset of illness to presentation.

Clinical and radiological correlation between serum calcium and acute ischemic stroke

Madan Mahesh Singh, R. L. Meena
RNT Medical College

Introduction: Cerebrovascular diseases include some of the most common and devastating disorders: ischemic stroke and hemorrhagic stroke. Stroke is the second leading cause of death worldwide. A stroke, or cerebrovascular accident, is defined as an abrupt onset of a neurologic deficit that is attributable to a focal vascular cause. The calcium ion (Ca2+) is a ubiquitous intracellular messenger during and immediately after an ischemic period, and an abrupt onset of a neurologic deficit. Experiments indicate that Ca2+ can have a harmful effect on neurons under acute ischemic conditions.

Material: This was a cohort-prospective study over period of one year with sample size of 50 cases. Serum calcium and albumin level were measured on admission. The DWI lesions were measured using MRI software.
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(Enteric Coated Aspirin)
and Canadian neurological score was assessed clinically. The relationship between serum calcium quartiles and DWI infarct volumes was examined using multivariate quartile regression analysis. 50 patients meet the study criteria.

**Inclusion Criteria:** Acute non-hemorrhagic ischemic stroke (presented in General medicine/neurology ward within 24hrs of onset of symptoms).

**Exclusion Criteria:** Patients with haemorrhagic stroke, recurrent ischemic stroke, cortical venous infarct and seizure disorder.

**Observation:** We aimed to assess the relationship between corrected serum calcium levels at admission and initial diffusion-weighted magnetic resonance imaging (DWI) and Canadian neurological scaling at the time of admission among patients of acute ischemic stroke. Fifty patients who met the study criteria were evaluated within 24 hours. The corrected serum calcium level were collapsed into quartiles: <8, 8-9, 9-9.9 and >10. The median DWI infarct volumes for the serum calcium levels quartiles (lowest to highest) were 16.6ml, 7.6ml, 6.9ml and 5.2ml; Canadian score for same quartiles (lowest to highest) were 3.8, 6.4, 6.5, and 6.9 respectively. The median adjusted DWI infarct volume in the lowest serum calcium level was statistically larger than that in other 3 quartiles (p<0.005) and Canadian neurological scores were lowest in quartile with lowest serum calcium.

**Conclusion:** The above results conclude that higher serum calcium levels at admission are associated with small infarct volume and high Canadian neurological score among patients with acute ischemic stroke. These results may serve as clinical-prognostic indicators following acute ischemic stroke.

**Table 1:** One way ANOVA for comparison of mean value of parameters within Quartiles

<table>
<thead>
<tr>
<th>Corrected Sr. Calcium Level Quartile</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (&lt; 8.0)</td>
<td>0.011</td>
</tr>
<tr>
<td>2 (8.0 – 9.0)</td>
<td>0.89</td>
</tr>
<tr>
<td>3 (9.0 – 10.0)</td>
<td>0.011</td>
</tr>
<tr>
<td>4 (&gt; 10.0)</td>
<td>0.011</td>
</tr>
</tbody>
</table>

**Graph 1:** Correlation between Sr. Cal and MRI Volume:

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### A Clinical and Diagnostic Evaluation of Ring Enhancing Lesion in Brain on Neuroimaging in a Tertiary Care Hospital of Eastern India

**Ritwik Ghosal**

**NRSMCH**

**Introduction:** A variety of infective, neoplastic & vascular diseases display Ring Enhancing Lesion (REL) on neuroimaging, which are very often difficult to differentiate.

**Aim of Study:**

**ETIOLOGY OF REL**

<table>
<thead>
<tr>
<th>No of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (&lt; 8.0)</td>
</tr>
<tr>
<td>2 (8.0 – 9.0)</td>
</tr>
<tr>
<td>3 (9.0 – 10.0)</td>
</tr>
<tr>
<td>4 (&gt; 10.0)</td>
</tr>
</tbody>
</table>

**Methods:**

**Inclusion Criteria:** >12yrs of age person with REL on neuroimaging

**Sample Size-40**

**Study Duration:** 2yrs

**Study Design:** Prospective observational study

**Method:** Detailed clinical history, past history, clinical examination, routine lab tests, CBC, ESR, Serology, CSF analysis, USG W/A, CXR, Neuroimaging-CT, MRI, MR Spectroscopy, cisternalcystic-catheter overflow & other relevant investigations

**Results:**

**Distribution:** 23(75.5%) -m, 17(52.5%) -f, 12(30%) -in age gr of 21-30 f/b 9(22.5%) -in age gr 31-40.

**Etiology:**

- Pt had NCC, TB, MTS, Abscess, Tumours, C. pecococca, Hematoma, Tumefactive demyelination -1 cases
- History: Headache, seizure, Gtcs, focal 34%, fever, vomiting, altered consciousness, hemiparesis

**Examination:** Papilledema 15(37.5%), CN palsy 6(15%), hemiparesis -25% patients

**Imaging:** DWI -22(55%) -multiple rel, 18(45%) -single rel, 27(67.5%) ->1 cm (37% ->3 cm), 32(80%) PL edema, 10(25%) -ML shift.

**Discussion:**

1. NCC -92% presented with seizure, <1 cm REL, mild PL edema, 61% multiple lesion, MRS -<NAA pos, 69%.
2. TB -70% -low grade fever, 75% -feature of ICT, 55% -seizure, 50% -6%, 33% -7% n/v palsy, 75% -feature of ESR, 66% -abnormal CSF, 60% -pontine pos, 33% -feature of PTB (CXR, CT), 83%-1 cm, 58% -single, 75% -feature of ICT, CR, 40% -LPD posit
3. MTS -80% -ICT, 60% -GTCS, 40% -hemiparesis, CN palsy, 75% -anaemia, all had proven carcinoma (melanoma,breast, lung, ca).
4. Abscess -High grade fever -100%, ICT, CSF -bact meningitis, ICT, >3 cm rel with PL edema, ML shift, MRS, ICT, LPD pk, h/o -csom, sinusitis.
5. TUMOUR -80% had FND, 50% -ICT, >2 cm, single REL, MRS -definitive, ICT, ICT

**Conclusions:**

**Limitations:** Small sample size, MRS, CSF could not be done in all patients, histopathological correlation not done, many patients lost follow up

**Conclusion:** History, proper clinical examinations & logical investigations including neuroimaging can solve the mystery of REL & prevent non-feasible brain biopsy. New promising MRS can be an adjunctive to the abovementioned methods but not a substitution in diagnosing or managing a case of REL.

**Voltage gated potassium channel antibody positive neuromyotonia: A case series**

**Sreenivasu Mudeula, K. Vijayan**

**Kovai Medical Centre and Hospital**

**Objective:** We are reporting 32 Voltage gated potassium channel (VGKC) antibody positive cases of neuromyotonia. We discuss our observational findings of clinical manifestations and possible predisposing factors of these cases and treatment options.

**Materials & methods:** VGKC are a family of voltage gated potassium channels & are membrane proteins – leucin rich glioma inactivated protein 1 (LGI1) & Contactin-associated Protein 2 (CASPR2). We retrospectively evaluated 32 cases of VGKC Ab positive neuromyotonia since 2013 from western Tamilnadu region. 3 cases were tested positive for both, one case for LGI1, and remaining 28 tested positive
Observation: In pyogenic meningitis CSF-CPK was elevated in 11 out of 12 cases, in tubercular 17 out of 20 cases & in viral 5 out of 8.

Conclusion: It can be concluded that CSF-CPK is elevated in all cases of meningitis. The higher the values of CSF-CPK the worse was the prognosis.

Factors responsible for Epilepsy treatment gap at a tertiary care hospital

Shreyas Ravat, Keyur Panchal, Neeraj Jain, Mansi Shah, Sangeeta Ravat
Dr. Vasantrao Pawar Medical College, Nashik

Introduction: Treatment gap, or the percentage of people with active epilepsy not on treatment, is a major concern especially in developing countries. Various factors responsible for treatment gap include those related to the patient (education, socioeconomic status, personal beliefs, etc.), the physician (misdiagnosis, negligence, unavailability) or treatment (high cost, adverse effects). We conducted this study to evaluate the incidence, demographic characteristics and determinants of treatment gap at tertiary care center and to assess healthcare-seeking behavior of patients.

Material and methods: It was a cross-sectional observational study conducted at the outpatient epilepsy clinic at our center, after obtaining ethical clearance. 500 consecutive patients with active epilepsy attending our epilepsy clinic for the first time were included in the study after taking written informed consent. A self-structured goal directed questionnaire was administered to interview the patients. The questionnaire was translated in Marathi and was pilot tested in 10 patients. Self-structured questionnaires were then administered to the patients in Marathi. Patients were ensured the confidentiality of their responses and the collected data were analyzed after the completion of the study.

Result: 265 of 500 (53%) epilepsy patients had a treatment gap. Amongst the factors responsible, patient related factors were most common (69.8%), which included socioeconomic and educational factors, followed by physician related factors (21.57%) and treatment related factors (8.6%). Secondary (46.59%) TG was more common than primary (44.69%) and treatment related factors (21.57%) and treatment related factors (8.6%).

Conclusion: Peripheral neuropathy was more common in patients with a CD4 count less than 200/mm3. High index of clinical suspicion of nervous system involvement in HIV patients at all stages help in early diagnosis and institution of specific therapeutic measures which in turn will decrease mortality and morbidity. This is a small study carried out in a small population and does not indicate the true incidence or prevalence of the disease in the community, further study is required.

#ART (anti retroviral therapy), CD (cluster of differentiation)
Clinicoradiological features and Outcomes in Strokes due to Carotid and Vertebral Artery Dissection

Jafrin Daniel, Sanjith Aaron, Thambu David Sudarsanan, Angel Miraclin, Harshad Vanjare, Bijesh Yadav
Christian Medical College Vellore

Introduction: Carotid & vertebral artery dissection are increasingly recognized as aetiology of stroke. We intended to study the clinicoradiological features and outcomes among patients presenting with stroke due to CD & VD over a period of 5 years.

Material: Information was collected retrospectively from electronic medical records from June 2011–July 2016. Details on follow-up were accessed from the stroke clinic records.

Observations: Among the 1700 patients with ischemic stroke, 36 (2.1%) were due to dissection. 19 (52.7%) patients had CD & 17 (47.2%) had VD. There was male preponderance (86.1%). Mean age at presentation was 30.7 years (range 16-61 years). All patients with CD had motor deficits while 82.3% of patients with VD had giddiness as index presentation. The commonest aetiology for CD was traumatic whereas in VD the aetiology varied from atlantoaxial dislocation to chiropractic manoeuvre. Dissection was diagnosed using multimodal imaging technique. The commonest arterial segment involved was extra cranial carotid artery in 15 (78.9%) & V3 segment of vertebral artery in 16 (94.1%). Presence of luminal thrombus and flap could be demonstrated in 86.1% & 83% respectively. According to TOAST classification 22.2% had TACS, 30.5% had PACS & 47.2% had POCs. Treatment was with combination of antplatelet & anticoagulation in 25(69.4%). Decompressive surgery was required in 2 patients. 5(13.9%) patients required mechanical ventilation (VD-23.5%). The mortality at 6 month was 77%. At 6 months 50% had MRS of ≤3 (57.9% in CD, 35.3% in VD).

Conclusions: In young patients presenting with acute headache, giddiness & neck pain a dissection should be suspected. A Multimodal Imaging technique will be required for diagnosis. Outcome was better with Carotid Dissection than with Vertebral Dissection.

Carotid artery Dissection–CD, Vertebral artery Dissection–VD

Awareness of Stroke, Thrombolytic therapy and window period in attendants of neurology patients

Ankit Gupta, Ankush Sharma, B.K Agrawal, Manish Mahajan, Nitin
MMMSR

Introduction: Stroke is the second leading cause of death worldwide. Community-based prevalence studies of stroke in India have shown huge variation in prevalence in the range of 147-922/100,000. (1). In-spite of availability of thrombolytic therapy, patients do not arrive in time for the treatment. Poor knowledge and awareness of stroke, its risk factors and therapy seems to be the reason for delay in reaching hospital and non-initiation of thrombolytic therapy.

Material: Questionnaire based study, carried out amongst attendants of patients visiting our tertiary care hospital in rural Haryana, India. Questionnaire consisted of variables to evaluate knowledge of stroke, warning signs, and risk factors, drugs used in stroke treatment, knowledge and awareness of thrombolytic therapy.

Observation: Total of 1000 consecutive attendants visiting neurology OPD were given the questionnaire, out of which 656 (259 male and 397 female) completed it. One hundred and thirty two (20.1%) reported a family history of stroke. Five hundred and twenty nine (80.6%) identified the brain as the aetiology of stroke. The most common risk factor recognized for stroke was hypertension (74.7%). Thirty six (5.5%) subjects were unaware of any risk factor for stroke. According to three hundred and forty six subjects (52%), Ayurvedic/homeopathic medicine should be the treatment of choice. Two hundred and eighteen (33.2%) also choose witchcraft as the treatment modality. Only seventy one (10.8%) subjects were aware of thrombolytic therapy in stroke and only ten (0.2%) could tell correctly about the window period.

Conclusion: Our study concludes that there is poor knowledge of stroke, risk factors and treatment. Community based education programme about stroke might help in stroke risk reduction and early hospitalization and treatment.

Relation of HbA1C level with type of Stroke

Suraj Chaturvedi, T. N. Dubey, A. Arya, R. S. Saxena
Gandhi Medical College and Hamidia Hospital Bhopal

Introduction: Stroke, defined as abrupt onset of focal neurological deficit due to vascular cause is the second most common cause of mortality and the third most common cause of disability in developed countries. Several risk factors contribute to the development of ischemic stroke including hypertension, smoking, dyslipidaemia, age, and last but not least diabetes mellitus. Ascertainning role of HbA1C levels (which reflects glycemic status over a period of three months) in predicting type of stroke can help in planning preventive strategies for stroke.

Materials: This study was conducted from March, 2015 to May, 2016. 500 patients aged >25 years who presented with clinical features of stroke were included in the study. This patient underwent Neuro- Imaging and HbA1C level was done of each patient.

Observation: Out of total patients 384 (76.8%) had ischemic stroke and 116 (23.2%) had hemorrhagic stroke. 185 (37%) patients had HbA1C levels > 6.5% out of which 180 were previously diagnosed case of diabetes mellitus. In this group 174 (94%) had ischemic stroke whereas 11(6%) patients had hemorrhagic stroke. 315 (63%) patients had HbA1C < 6.5%. In this group 210 (66.6%) had ischemic stroke and 105 (33.4%) had hemorrhagic stroke. Association between HbA1C level > 6.5% and ischemic stroke was found to be significant. (P value <0.05).

Conclusion: Level of HbA1C showed positive relation with ischemic stroke from our study implying that due considerations should be given for possibility of using routine HbA1C testing in all patients with Ischemic stroke for secondary prevention and routine screening in hospital registry for the patients with high cardio vascular risk for primary prevention.

Clinical Profile and Outcome of Patients with Acute Febrile Encephalopathy Presenting to Tertiary Care Hospital

Dilshad Begum, S. M. Imroz, Ch. Indira Priyadarshini
Sri Venkateswara Medical College, Tirupati

Background: Acute febrile illness is a common cause of hospital admissions. It is a clinical term used to describe altered mental state that either accompanies or follows a short febrile illness and is characterised by a diffuse and nonspecific brain insult manifested by a combination of CNS manifestations.

The aim of the study:
1. Aim and objective of the study is to identify etiology and outcome in the adult patients with acute febrile encephalopathy.

Methods: Retrospective observational study of 100 Patients admitted with acute febrile encephalopathy presented to SVRGGH between January 2016-December2016 and was studied over one year

Inclusion criteria:
1. Patients 15 and above age group with fever of less than 2 weeks, altered mentation lasting for more than 24 hrs.

Exclusion criteria:
1. Metabolic disturbances like hypoglycemia, hypoxia, hypercarbia, hyponatremia, azotemia, ICSOL (intra cranial space occupying lesion) or endocrinopathies.
2. Persons with cerebro vascular accidents also excluded.
3. Noninfectious causes of loss of consciousness (eg: head trauma)
4. Patients who did not consented for the inclusion in the study.

Results: We noticed among 100 patients acute viral encephalitis was the most common etiology (36%), followed by sepsis associated (26%), pyogenic meningitis (21%), cerebral malaria (7%), tuberculosis (6%).
Conclusions: For acute febrile encephalopathy most common cause is acute viral encephalitis followed by sepsis associated encephalopathy and pyogenic meningitis.

Study of Peripheral Neuropathy in End Stage Renal Disease Patients on Haemodialysis
Rohan Gayakwad, T. N. Dubey, K. K. Kawre, N. Shrivastava
Gandhi Medical College Bhopal

Introduction: End stage renal disease is commonly associated with peripheral neuropathy which is distal, symmetrical and length dependent. This study was undertaken to observe prevalence, type and pattern of peripheral neuropathy in end stage renal disease patients being treated by maintenance haemodialysis.

Materials: 50 patients of end stage renal disease being treated by maintenance haemodialysis for duration more than 3 months were included in study. Diabetics were excluded. All patients were investigated with renal function test, blood sugar, ultrasound abdomen, electrolytes and nerve conduction studies (NCS). Estimated glomerular filtration rate and modified total neuropathy score was calculated in each patient.

Observation: Majority of patient in study were in age group of 21 to 40 years. Male to female ratio was 1.7:1. Most common etiology of end stage renal disease was undetermined (44%). Maximum (36%) patients were on haemodialysis since 1 year. 34% patients had normal NCV report and 66% had abnormal report, out of which 26% patients had overt and 40% had subclinical neuropathy. Maximum patients had axonal sensorimotor neuropathy involving 4 limbs. Severity was found to be directly correlated with level of serum potassium, urea and creatinine based on calculation of modified total neuropathy score.

Conclusion: Present study finds out high prevalence of peripheral neuropathy in end stage renal disease patients being treated by maintenance haemodialysis. Majority of patients have overt or subclinical peripheral neuropathy which can be axonal demyelinating or both. Severity can be reliably compared with modified total neuropathy score. Hence through this study we emphasis on calculation of modified total neuropathy score and nerve conduction study in every patient planned for maintenance haemodialysis.

Cognitive Impairment in Hypertensives and Diabetics- A case control study
Natasha Tipnis, Girish C. Rajadhyaksha, Meghav M. Shah
Topiwala National Medical College

Introduction: Dementia is a chronic progressive illness in which cognitive and/or behavioural functions are deranged because of various diseases. Hypertension and diabetes are being increasingly recognized as major risk factors for same.

Materials: This case control study involved 300 patients from a tertiary care hospital in Western India enrolled over a span of 14 months of which 75 were hypertensive and diabetic patients, 75 were hypertensive but non diabetic, 75 were diabetic but non-hypertensive and 75 were non-hypertensive and non-diabetic. Cases were subjects, aged 40 years or older, either sex, diagnosed as hypertensive and on anti-hypertensives for a minimum of 5 years and diabetics on medications for a minimum of 5 years. We assessed cognition using the Hindi MMSE test.

Observations:
1. The mean HMMSE score of the hypertensive subjects was 26.71 which was significantly less than that of the non-hypertensive subjects 27.60. This difference was statistically significant in the age group of >=60 years but not significant in age group between 40-59 years when assessed separately.
2. The mean HMMSE score of hypertensive subjects who were educated till 8-12th grade was 27.76 which was significantly more as compared to the uneducated subjects 25.64 which showed education has an independent association with cognition.
3. The mean HMMSE score of hypertensive subjects for orientation to time was 4.79 which was significantly lower than that for non-hypertensive subjects 4.93. The mean HMMSE score of hypertensive subjects for registration was 2.91 which was significantly lower than that for non-hypertensive subjects 2.99. The mean HMMSE score of hypertensive subjects for recall was 1.36 which was significantly lower than that for non-hypertensive subjects 1.63. The mean HMMSE score of hypertensive subjects for 3-step command was 0.87 which was significantly lower than that for non-hypertensive subjects 0.95.
4. Hypertensive cases with history of smoking, alcohol consumption, tobacco use, history of ischaemic heart disease and evidence of urine micro-albuminuria had no significant difference in cognitive impairment, whereas those with hypertensive retinopathy or 2D echocardiography evidence of hypertension had significant cognitive impairment as compared to their counterparts.
5. On comparing the mean HMMSE score of diabetics with non-diabetics, the mean HMMSE score of diabetics was 26.81, which was significantly less as compared to 27.51 for non-diabetics.
6. Mean HMMSE Score for orientation to place was 4.91 for the diabetic subjects, which was significantly less as compared to 4.99 for the non-diabetic subjects. Mean HMMSE Score for drawing was 2.37 for the diabetic subjects, which was significantly less as compared to 2.57 for the non-diabetic subjects. This suggests that, like hypertension, diabetes also affects different domains of cognition differently.

Conclusions: Hypertension and diabetes affect cognition in elderly and selectively affect certain cognitive domains more over others. Hence, it can be suggested that cognitive assessment be a part of routine follow-up protocol for these subjects aged 60 years and above.

Oncology

Contrast Enhanced Digital Mammography: Our experience
Bhavika Patel
Mayo Clinic, Arizona

Contrast Enhanced Digital Mammography is the newest of the contrast enhanced imaging technologies in breast imaging. CEDM holds great promise to improve breast cancer screening by addressing the potential drawbacks of MRL. CEDM generates a high-resolution, low-energy, full-field digital mammography image and, similar to MRI, a contrast-enhanced image that provides lesion vascularity information. The resulting contrast enhanced subtraction images maximize the conspicuity of iodinated contrast agent in the breast while minimizing the structured noise of non-enhancing fibroglandular tissue, thus revealing lesions with higher neovascularity and extracellular leakage of contrast agent more apparently. The high spatial resolution of the digital detector reveals lesion details with approximately ten times the spatial resolution of breast MRI.

We present our clinical experience of over 400 CEDM cases over the past year of diagnostic use. In this presentation we will demonstrate classic examples of benign and malignant breast cases on CEDM. We will also present general overview of study results and a brief discussion on how to implement CEDM into the workplace.

Poisoning & Toxicology

To study the effectiveness of local evidence based protocol in management of acute organophosphate poisoning
Palka Bhuta, Arti Muley, Nikhil Patel, Kaumudi Chennansetti
SBKSMIRC

Introduction: Identifying need for a proper protocol for identifying patients at greater risk of mortality and management of patients with acute OP poisoning, we conducted a retrospective cohort study which reported that SpO2 <85%, time elapsed since exposure > 2 hours, s. acetylcholinesterase < 1000 and GCS < 12
at the time of admission were related with increased need of mechanical ventilation, longer hospital stay and poorer prognosis. Based on this evidence we made a local protocol for management of OP poisoning. We planned this study to apply and assess the effectiveness of this protocol in reducing morbidity, reducing hospital stay and improving prognosis in cases of acute OP poisoning.

**Methodology:** The study is being conducted in the Deptt. of Medicine, SBKS MI & RC, Sumandeep Vidyaapeeth, Piparia after procuring approval from the institutional ethics committee. It is an observational study. All cases of OP Poisoning coming to the Dhiraj General Hospital are enrolled in the study and subjected to measurement of vitals, spO2 at room air, GCS and s. acetylcholinesterase apart from the routine clinical examination and investigations like CBC, RFT, LFT, s. electrolytes, ECG and ABG at the time of admission. Duration of stay in hospital, occurrence of any other complication and final outcome are also being recorded for all participant cases. The data thus collected will be analysed to find relative risk of extended hospital stay, complications and mortality in patients with spO2 at room air < 85%, time elapsed since exposure > 2 hours, s. acetylcholinesterase < 1000 and GCS < 12 at the time of admission. Data will be collected till end of September 2016. The data will then be analysed and results are expected by October 2016. With the results we expect to validate the evidence based protocol for management of organophosphorus poisoning and suggest an easy to use severity scoring system for identifying acute organophosphorus poisoning patients at greater risk of morbidity and mortality.

**Clinico-Etiological Profile of Poisoning in a Tertiary Care Hospital of North-Eastern India**

Madhuchanda Das, B K Nath, P Bhattacharjee, P Das
Silchar Medical College

**Introduction:** Poisoning is a common cause of visit to emergency department, particularly in developing countries. 91% of all poisoning related death is reported from developing countries. The factors contributing to mortality and morbidity in poisoning are the toxic potential of the poison, the time interval from intake to visit to the health care facility and the availability of primary health care. The common poisons and their toxic manifestations vary in different geographical areas.

**Aims and Objectives:** To study the etiological profile and clinical presentation of poisoning cases in this region.

**Materials and Methods:** This is an observational study conducted in Department Of Medicine, Silchar Medical College from July 2015 to June 2016. All confirmed cases of poisoning of both sex, age 12 years or more were included. Patients not giving consent to participate in the study and those with doubtful history were excluded. The diagnosis was made on the basis of history taking, clinical features and the sample of poison brought by the party.

**Results:** Out of 743 cases, 56% patients were male and 44% female. The commonest poison type in males was organophosphate compound in 43% cases, followed by rodenticide and alcohol in 23% and 19% cases respectively. In females, the commonest poison was phenol in 39% cases, followed by organophosphate in 26% cases. The mortality of organophosphate compound poisoning was higher in females than in males. The common presenting features were vomiting in 73% cases and frothing from mouth in 28%. Most of the male patients were students, farmers or unemployed youth and the females were unmarried girls doing household work or housewives. Most of the patients attended hospital in evening hours with an interval of 4-8 hours between intake and hospitalization and only 29% patients received primary care before coming to SMCH. The mortality rate was 2.7% in males and 3.1% in females, 92% attributable to organophosphates.

**Conclusion:** This study showed a male preponderance of poisoning in this region in 20-30 years of age. The commonest poison overall was organophosphate compounds whereas in females, phenol was most common. Only few patients received primary care before reaching SMCH.

**Study of Hyperglycemia in Correlation with Pseudocholinesterase Levels and Severity of Organophosphorous Poisoning**

Man Mohan U S, Ravi B N, H Vasudev Naik
Adichunchanagiri Institute of Medical Sciences

**Background and Objective:** Random blood sugar(RBS) level is one of the factors which influence the severity of the organophosphorous compound poisoning. This study aims to predict the prognosis and mortality of organophosphorous (OP) compound poisoning based on random blood sugar level and correlate it with pseudocholinesterase activity.

**Methods:** 103 cases of OP poisoning admitted to Adichunchanagiri Hospital and Research Centre, B.G.Nagar, MANDYA, between June 2015-May 2016 were studied. Detailed history and clinical examination was done according to the proforma with special reference to the need for ventilator support/admission RBS and pseudocholinesterase levels.

**Inclusion Criteria:** Patients above 18 yrs of age were included and those patients with mixed poisoning.

**Exclusion Criteria:** Alcohol consumption and Diabetics were excluded.

**Results:** Of the 103 patients,males were 57%,females 43%,majority were between 18-25 years with farmers (55%) as the main group and suicidal ingestion (93%) as the main cause. Methyl parathion was the commonest compound (15%) consumed but most of the time compound was unknown (33%). Commonest symptoms were vomiting (94%) and salivation (94%). Respiratory failure was the commonest complication(30%). Hyperglycemia occurred in 39% of patients with 73% developing complications and 50% requiring ventilator. Pseudocholinesterase was less than 4000U/L in 19% of patients,with complications occurring in 100% and 79% requiring ventilator support. Mortality was 35% in patients with hyperglycemia (p<0.05 S) and 79% in patients with pseudocholinesterase <4000U/L(p<0.01)

**Conclusion:** Admission RBS >200mg/dl and pseudocholinesterase <4000U/L are reliable parameters to predict mortality and ventilator requirement in organophosphorous compound poisoning.

**Study of Clinical Profile in Mass Ammonia Inhalation**

Ajinkya Borhade, Chitrangada Yadav, S. Arurghaj Sundaram Arurhaj Hospital

**Introduction:** Ammonia is highly irritant colorless gas with severe pungent odor. It is used as a refrigerant gas in cold storages in the form of Liquid ammonia under high pressure. We managed 20 cases of accidental exposure to large concentration of gaseous ammonia.

**Aim:** To study the clinical profile of these patients and their hospital course.

**Material and Methods:** 20 female patients received at Emergency room of Sundaram Arurhaj Hospital,Tuticorin after a pipe carrying ammonia gas burst at a sea food storage. All victims were studied during their hospital stay and one week follow up.

**Observations:** All female patients in 20s-30s,mean age was 23. They presented with varied presentations. All developed significant respiratory distress. Pharyngeal symptoms(17 cases), Dyspnoea(16),Itching (15), Cough (14),Chest pain (14) Ophthalmic symptoms(17), Nasal irritation, conjunctival suffusion,moderate respiratory discomfort, Chest Xray: Increased Bronchovascular markings Group 3:(3) Severe respiratory distress, falling O2 saturation, Decreased consciousness,Severe Rales,Rhonchi on examination, Chest Xray opacification. corneal burns (3) All patients were given IV hydrocortisone 200mg. Nebulisation, supportive O2.

**Group 1:** No specific treatment. Discharged 2nd day. **Group 2:** Improved
slowly with decremental cough, mean duration 7 days.

Group 3: Significant complications 2 were intubated on IV steroids and aminophylline. Gradually extubated.

Conclusions: Exposure to ammonia gas can lead to severe respiratory distress. The structures most commonly involved are the lungs and eyes and skin. Steroids, oxygen and bronchodilators remain the mainstay for managing such patients.

Aluminium Phosphate Poisoning - Case Series

Parimala Pydi, K. Siva Prasad, B. Balasubramaniam. P. Padma

Sri Venkateswara Medical College, Tirupati

Aim: To study clinical profile, severity, complications, management and outcome.

Introduction: Aluminium phosphate (ALP) is a solid fumigant used as a rodenticide and widely available in rural areas. The commonest way of aluminium phosphate poisoning is by ingestion; It is formulated in solid form as tablets and pellets. Each tablet contains 56% ALP and 44% aluminum carbonate. The specified fatal dose is 0.15-0.5 g. Fresh and active compounds (tablets) commonly affect heart, lungs, GI tract and kidneys; causing severe metabolic acidosis, nausea, restlessness, abdominal pain, palpitation, pulmonary edema, cyanosis, hypotension, shock and cardiac arrhythmias. Other rare effects include hepatitis, acute tubular necrosis, disseminated intravascular coagulation and respiratory alkalosis, metabolic acidosis, nausea and abdominal pain. 95% of the patients die within 24 hours and the commonest cause of death in this group is cardiac dysrhythmia.

Type of Study: Retrospective study

Study Duration: 1 year duration from September 2015 to September 2016

Methodology: We are presenting a case series of 30 patients of aluminium phosphate poisoning. In this we analysed regarding the form of compound ingested, time of arrival, onset of symptoms, type of symptoms, investigations management and survival rate. All patients received gastric lavage with potassium permanganate. Treated with intravenous magnesium sulphate and IV fluids vitamin K, proton pump inhibitors.

Results: Out of 30 patients 10 patients had cardiac arrhythmias and succumbed with in 18hrs and 9 patients had severe hypotension, succumbed with in 24hrs inspite of inotropic support. remaining 9 patients survived of which 4 had mild metabolic acidosis, 2 patients had mild nausea and abdominal pain.

Conclusion: Mortality depends upon dose of poison, severity of poisoning, duration of shock, failure of response of shock to resuscitative measures & severity of hypomagnesaemia

### Respiratory Diseases

**Impact of COPD severity over Heart Rate Variability**

Prem Parkash Gupta, Sushma Sood, Aashutosh Asati, Rohtash Yadav, Dipti Agarwal Postgraduate Institute of Medical Sciences, Rohtak

**Introduction**: Heart rate variability (HRV) assessment provides an insight to the state of the autonomic nervous system (ANS) responsible for regulating cardiac activity and the overall cardiac health.

**Objectives**: To assess the HRV in COPD patients with moderately severe vs severe airflow obstruction.

**Methods**: 60 patients (50 male) diagnosed to have COPD according to GOLD guidelines and consented for study were included. For analysis purpose, study patients were divided in two groups defined by a cut of value of postbronchodilator FEV1 (1.220 L). For HRV measurement, POLYRITE D system was used; HRV was recorded in supine position with subjects being in relaxed静态. Both frequency and time domain parameters were analysed.

**Observations**: 60 COPD patients (10 female) completed the study. Their mean age was 59.9± 6.74 years, mean duration of illness was 10.96± 4.69 years with a mean smoking of 24.3±6.07 pack years. Their HRV parameters were as shown below in table:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Severely Moderately</th>
<th>T value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDNN (ms)</td>
<td>101.73±61.62</td>
<td>75.70±40.254</td>
<td>2.679</td>
</tr>
<tr>
<td>RMSSD</td>
<td>68.43±16.069</td>
<td>48.90±16.179</td>
<td>5.144</td>
</tr>
<tr>
<td>NN50</td>
<td>156.67±41.021</td>
<td>171.76±32.324</td>
<td>4.087</td>
</tr>
<tr>
<td>VLF (PP)</td>
<td>30.74±8.536</td>
<td>27.64±6.859</td>
<td>2.080</td>
</tr>
<tr>
<td>VLF (ms)</td>
<td>281.93±104.176</td>
<td>184.70±69.454</td>
<td>1.264</td>
</tr>
<tr>
<td>LF (PP)</td>
<td>46.87±4.812</td>
<td>36.21±4.982</td>
<td>7.433</td>
</tr>
<tr>
<td>LF (ms)</td>
<td>60.96±15.033</td>
<td>57.42±8.241</td>
<td>2.210</td>
</tr>
<tr>
<td>HF (ms)</td>
<td>290.77±111.354</td>
<td>260.20±125.785</td>
<td>2.037</td>
</tr>
<tr>
<td>HF (PP)</td>
<td>18.57±3.461</td>
<td>14.03±3.333</td>
<td>4.844</td>
</tr>
<tr>
<td>HF (ms)</td>
<td>27.25±7.190</td>
<td>20.47±6.347</td>
<td>3.702</td>
</tr>
<tr>
<td>LF/HF</td>
<td>112.97±56.033</td>
<td>80.43±49.229</td>
<td>2.389</td>
</tr>
<tr>
<td>LF/HHF</td>
<td>3.03±0.999</td>
<td>4.30±1.466</td>
<td>3.911</td>
</tr>
</tbody>
</table>

**Conclusions**: In our study, both time and frequency domain HRV variables were significantly decreased in severe COPD group; LF/HF ratio was also significantly increased in this group. These findings suggest an imbalance in sympathetic to parasympathetic system in severe COPD group leading to a higher propensity to cardiac arrhythmias in COPD patients.

**Prevalence of Ofloxacin Resistance in MDR-TB and Relevance of Bedaquiline Use**

Srinivasan Karthikeyan, Anbananthan, Akila, Vishnuram, Kumar Natarajan

Coimbatore medical college

Aim: To estimate the prevalence of ofloxacin resistance in patients diagnosed to have MDR TB and the relevance of bedaquiline use in such patients

Introduction: Tuberculosis is the leading infectious cause of death today. There is increasing rate of MDR and XDR TB. Fluoroquinolones have been classified as drugs having low bactericidal activity by the WHO and ofloxacin has been advocated by the WHO in case of MDR TB.

This study aims to find out the prevalence of ofloxacin and kanamycin resistance in patients with MDR TB and the relevance of bedaquiline in treating such patients.

Objectives: To find out the prevalence of ofloxacin and Kanamycin resistance among MDR TB patients.

Materials & Methods: This study was done in a total of 225 referral cases, out of which 180 were males and 45 females. MDR resistance was established with CB NAAT in 122 patients, Line probe assay in 103 patients. DST culture test was started on 9/7/14. The patients were followed for a period of two years.

The study group profile is as follows:

Failure - 4; Retreatment sputum positive - 171; Any follow up positive -21; HIV disease - 22; Contact MDR - 3; Smeared negative treatment cases - 3; New MDR TB -1.

**Results**: Out of the total of 225 patients, ofloxacin and kanamycin sensitivity was detected in 198 patients (88%), resistance to both in 2 patients (0.8%). Ofloxacin resistance detected in 24 patients (10.66%) and kanamycin resistance in 1 patient (0.4%). Fluoroquinolone resistance has been increasing across the globe and according to WHO, Bedaquiline is recommended for the treatment of MDR TB with documented resistance to fluoroquinolones. Its bactericidal activity is comparable to RIF-INH-PZA. There is no cross resistance to other anti TB drugs. However further studies are needed to alleviate its concern regarding side effects including QTc prolongation.

Rheumatology & Immunology

Safety and efficacy of rituximab in ankylosing spondylitis- A prospective one year follow up study


Midnapore Medical College, Paschim Medinipur, West Bengal

Introduction: Among the various spondyloarthritides ankylosing spondylitis (AS) holds the special value for its unique characteristics and most importantly limited therapeutic options. It primarily affects the axial skeleton with some involvement of peripheral joints and extrarticular structures such as unilateral uveitis. It shows a striking correlation with the
improvement in disease activity according to the assessment of Spondyloarthritides international society criteria (ASAS20). Fortunately these two patients didn’t have any flare up reaction, so we followed them up to 48 weeks as per our protocol.

**Observations:** Statistical analysis was performed as an intention-to-treat analysis. The non-parametric Wilcoxon signed rank test was used to compare changes between baselines to after-treatment values; p-values < 0.05 were considered significant.

### Parameters studied in tabular form:

<table>
<thead>
<tr>
<th>Baseline</th>
<th>4 week</th>
<th>8 week</th>
<th>16 week</th>
<th>32 week</th>
<th>48 week</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDAI</td>
<td>4.6</td>
<td>3.5</td>
<td>1.9</td>
<td>1.5</td>
<td>1.1</td>
</tr>
<tr>
<td>BASFI</td>
<td>5.5</td>
<td>4.2</td>
<td>2.9</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>BASMI</td>
<td>4.9</td>
<td>3.3</td>
<td>3.6</td>
<td>3.0</td>
<td>2.2</td>
</tr>
<tr>
<td>ASDAS-CRP</td>
<td>4.1</td>
<td>3.4</td>
<td>2.6</td>
<td>2.4</td>
<td>2.0</td>
</tr>
</tbody>
</table>

The BASDAI score for the first patient had dropped significantly from a very high value after 4 weeks (5.8 to 3.9-33% reduction) and thereafter it decreased in a steady state without any flaring. Even the BASFI, BASMI, Inflammatory markers reduced to 68%, 44%, 89% after 48 weeks respectively.

Strikingly the second patient also had reduction of BASDAI score to 50% (4.6 to 2.3) after 8 weeks, not after 4 weeks. It probably explains the possible delay in the effect of rituximab in reducing inflammation and symptoms. After 48 week of follow up the BASDAI, BASFI, BASMI scores reduced to 77%, 59%, and 56% from its pre-treatment value respectively. ASDAS-CRP score of these two patients reduced upto 52% and 61% respectively which improved working capacity and social acceptance of those patients. Last but certainly not the least we have shown the decrease degree of sacroiliitis on MRI SI joint of these patients 16 weeks after rituximab treatment.

These two patients didn’t have any side effects at all such as infusion related toxicities, any kinds of discomfort during the transfusion. Complaints of upper abdominal discomfort were probably attributed to prolonged use of NSAID’s.

### Conclusion:

Specifically to counteract the disadvantages of TNF-alpha inhibitors we have tried to use rituximab as the primary mode of therapy ahead of TNF-alpha inhibitor. Song et al. evaluated the efficacy of rituximab in 20 AS patients in 24 week study who did not respond to treatment with TNF-alpha inhibitors showed that rituximab was not effective in patients who did not respond to TNF-alpha before. Rodriguez gave rituximab to a chronic hepatitis B patient and that patient recovered well without flaring up of the infection. According to the data of the French Rheumatology Society, the efficacy of rituximab was evaluated retrospectively in 26 spondyloarthropathy patients. 11 of them responded well, among them 8 were TNF-alpha naive patients, 3 were non-responders. But no study has showed the efficacy profile in AS patient with the primary use of rituximab and with a follow-up of close to 1 year. In our study of weeks of follow-up on these 2 patients showed a significant reduction in BASDAI, BASFI, BASMI, ASDAS-CRP scores and sacroiliitis on MRI without any unwanted side-effects. A distinct point of our study is previous studies showed the response of rituximab in fixed dose i.e.1000 mg of two doses 14 days apart, but we are showing the results of infusing rituximab in 375 mg/m^2 doses 2 weeks apart, thereby reducing the unnecessary extra dose of a very costly medicine which is worthwhile in a developing nation like India. So as our follow-up of two patients to 48 weeks has been completed we hope to follow six more patients’ upto 48 weeks to get a complete picture of this therapy. But as of now we can say rituximab is efficacious and much safer mode of immunosuppressant therapy in AS ahead of TNF-alpha inhibitor therapy in weight dependent dosing especially in TB prone developing nations.

### Assessment of Disease Activity in Rheumatoid Arthritis: A Comparative Study of Clinical and Laboratory Evaluation with Musculoskeletal Ultrasonography Assessment

Anurag Nair, Punit Pruthi, Manoj Mittal, Siddharth Sood, Hariharan, Waqia Sultana
Asian Institute of Medical Sciences, Faridabad, Haryana

### Background:

1. Rheumatoid arthritis is a polyarticular disease and USG has been studied as a tool for assessment of disease activity. However there have been many debated questions like how many and which joint should be included, which view of the joint to be examined (volar or dorsal), how should the quantification of synovitis be done (present/absent or semi quantitative), which mode of USG to be used (B mode only, Doppler or combined).

2. Over the last many years, the OMERACT group has developed a standardized semi quantitative scoring system for synovitis in RA that combines GS and PD mode to quantify synovitis in a 0–3 scale and has demonstrated intra- and inter-observer reliability and is applicable to all joints and consistent between machines.

3. SWISS SONAR score examined total 22 joints in order to include approximately the same joints as widely used clinical scores in clinical practice, i.e. DAS28, but excluding thumbs and shoulders. These joints were excluded because they could be the site of common rheumatological...
problem not related to rheumatoid arthritis (osteoarthritis, rotator cuff lesion and other soft tissue disorders). The score includes the palmar view of joints for B mode and the dorsal view in PD mode.

Aims and Objectives:
1. Compare the currently used disease activity scores (DAS28, CDAI, SDAI) in rheumatoid arthritis patients assessed by clinical and laboratory evaluation with musculoskeletal ultrasound score (PDUS, grey scale score)
2. To assess the role of MSK ultrasound as an additional tool in measurement of disease activity score in rheumatoid arthritis.

Material and Methods: Comparative Observational Study
To correlate the USG derived score with clinical and/or laboratory score/values. The statistical analysis is done by Pearson’s correlation and student’s t test. The statistical analysis is done by using SPSS software.

Study Area: All in-patients (admitted) and out-patients (outdoor) of Department of Internal Medicine, of Asian Institute of Medical Sciences (AIMS), a tertiary care 350 bedded superspeciality centre located in Delhi NCR.

Inclusion Criteria: 18-70 years age group of male and female patients who have been diagnosed as rheumatoid arthritis as per ACR/EULAR 2010 classification criteria for Rheumatoid Arthritis.

Exclusion Criteria: 1. Congenital or developmental damage of any joint
2. History of trauma to any joint
3. Suspected current septic arthritis, or any past history of joint infection
4. Metabolic diseases affecting the joints like hyperparathyroidism, haemochromatosis, amyloidosis
5. Other types of arthritis like osteoarthritis, psoriatic arthritis, reactive arthritis, crystal deposit arthritis
6. Previous joint surgery
7. Neuropathic joint

Sample Size: A minimum of 50 RA patients will be included in the study.

Assess disease activity score by clinical and laboratory evaluation: DAS28 score(using ESR) and DAS28 score(using CRP) and CDAI will be used to assess disease activity of each patient.
PDUS and GSUS score will be added together and a cumulative score will be determined. (Maximum score 66 each for PDUS and GSUS). Any activity on PD strongly suggests the presence of active disease.

Conclusion: Musculoskeletal ultrasound shows equal significance when compared to Clinical scoring criteria’s as per our study. But it is highly observer dependent and needs skillful evaluation whereas the clinical assessment tool is easy to perform and can be performed bedside.

Profile of systemic vasculitis among adults in a tertiary care centre from South India
Ebenezer Daniel, Angel Miraclin T, Tunny Sebastian, Thambu David Sudarsanam Christian Medical College, Vellore

Introduction: Vasculitides are a group of inflammatory disorders known to affect the blood vessels. It poses a significant diagnostic challenge to a clinician in view of the affected patients presenting with varying clinical manifestations, with a wide spectrum ranging from isolated and cutaneous vasculitis to multisystem involvement. Hence we aimed to describe the profile of etiology, clinical presentations and management of adult patients with vasculitis in a single medical unit from Southern India.

Materials and Methods: We conducted a retrospective, record based analysis of vasculitis cases in a tertiary care center in South India from January 2010 to December 2015. Vasculitis was categorized as large, medium and small vessel vasculitis based on the standardized ACR diagnostic criteria. Small vessel vasculitis was further classified into ANCA associated and undifferentiated vasculitides.

Results: Twenty six cases of adult onset systemic vasculitis were included in this study. Fifteen (57.7%) patients were male (mean age 43±16 years). Ten (38%) patients had ANCA associated vasculitis among which granulomatous from Isolde polyangitis (n=6) was the most common. Polyarteritis nodosa was diagnosed in 2 patients and large vessel vasculitis was diagnosed in 5 patients, with a majority being Takayasu’s arteritis. There were isolated cases of renal limited vasculitis(n=1), primary CNS angiitis(n=1), undifferentiated small vessel vasculitis(n=4) and vasculitis secondary to other autoimmune phenomenon(n=3). Commonest symptom at presentation included fever (19; 73.1%) and cutaneous manifestations in the form of nodules, rash and ulcer (11; 42.3%). About 50% (n=13) had central nervous system complications, commonly being peripheral neuropathy (64.6%) followed by cerebro-vascular accidents. Other significant complications include pulmonary manifestations in the form of nodules (5; 19.2%), pulmonary arterial hypertension (1;3.8%) and diffuse alveolar haemorrhage (9; 34%), hematuria (8;30.8%) and cardiac involvement (5; 19%). Hypertension and diabetes were common co-morbidities in the population. Eleven patients had triad (nerve, muscle, skin) which showed features suggestive of leucocytoclastic vasculitis and seven patients had renal biopsy which showed evidence of crescentic glomerulonephritis. Pulse intravenous corticosteroids followed by oral steroids (21; 84.6%) was the mainstay of treatment. In addition to the steroids, 42.3% received cyclophosphamide, 30.8% received Azathioprine, and 15.4% received Mycophenolate Mofetil. The in-hospital mortality rate in our cohort was 11% (n=3).

Conclusion: Systemic vasculitis has varied presentation in adults, commonly being ANCA associated vasculitides. Central nervous complications are common followed by pulmonary complications. Steroids are the mainstay of treatment. Systemic vasculitis should be considered as differential diagnosis in patients with fever and multi-system involvement.

A Study of Clinical Profile in Male and Female Spondyloarthropathy
Laxmi Patil, Jyotsna Oak Kokilaben Dhirubhai Ambani Hospital

Background/Purpose: Ankylosing Spondylitis is more common in males and is not considered as differential diagnosis in females with inflammatory low backache. This leads to delay in diagnosis as well as treatment. There are very few studies done regarding female spondyloarthropathy. There are few studies on female SpA patients in Indian population to understand the clinical profile of presentation and course of their disease.

Methods: 60 males and 60 females satisfying ESSG or ASAS criteria for diagnosis of spondyloarthropathy were included in the study. Demographic characteristics like age, sex, age at time of onset of symptoms, age at diagnosis, diagnostic delay were recorded. Clinical data included articular and extrarticular symptoms, family history was collected. Clinical Assessment Scoring was done for all patients using BASDAI, BASFI, BAS-G, BASMI indices. Investigations like ESR, HLA B27, X-ray and/or MRI SI joint reports were noted. Data was analysed using unpaired T test for continuous data and chi square test for categorical data. P<0.05 was considered as significant.

Results: Age of onset of symptoms (M: 25.7±3.7yrs; F:28.3±9.9yrs) and age at first presentation (M: 30.2±9.21yrs; F: 31.28±10.8yrs) in females was greater than in males. Clinical Assessment with BATH indices showed females had equally severe disease as in men. (Table.1). Most common presenting symptom being low back pain followed by peripheral arthritis. It was observed that Indians have peripheral arthritis more common than the western population. However there was no significant difference in the delay in diagnosis in both the groups.

Conclusion: The severity of symptoms and disability is same in females and males with SpA. Females were increasingly diagnosed with SpA. Peripheral arthritis predominantly lower limb oligoarthritis is common in Indian population compared with western population. Most common symptom of presentation was low back pain and second most common symptom a
gluteal pain.

**Table 1:**

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDAI</td>
<td>5.456</td>
<td>5.0958</td>
</tr>
<tr>
<td>BASFI</td>
<td>5.3342</td>
<td>4.7752</td>
</tr>
<tr>
<td>BASMII</td>
<td>3.5167</td>
<td>2.5333</td>
</tr>
<tr>
<td>BAS-G</td>
<td>6.333</td>
<td>5.8683</td>
</tr>
</tbody>
</table>

**Study of Anti-Neutrophil Cytoplasmic Antibody Associated Vasculitis in A Tertiary Care Center**

Krutik K, Lokesh Chaudhari, Milind Y, Parle

Seth GS Medical College and KEM Hospital, Mumbai, 400012

**Introduction:** Anti-Neutrophil Cytoplasmic Antibody (ANCA) Associated Vasculitis (AAV) is a group of uncommon multisystem diseases with inflammatory cell infiltration and necrosis of blood vessel walls characterised by involvement of small and sometimes medium-sized arteries. It has a varied presentation with risk of multiorgan involvement which can be fatal. ANCA-Associated-Vasculitis (AAV) comprises three different diseases entities: Eosinophilic Granulomatosis with Polyangiitis (EGPA), Microscopic Polyangiitis (MPA), Granulomatosis with Polyangiitis (GPA).

**Aims:** We studied the clinical profile and subtypes of AAV with stress on organ involvement and outcome with a 3 month follow up.

**Methods:** This is a Longitudinal, Prospective & retrospective, single center study of 30 patients for 18 months in a tertiary care center with a 3 month follow up.

**Results:** In GPA (n=16) constitutional symptoms were present in 81%, LRT in 69%, Renal in 62%, URT symptoms in 50%, Neurological in 31%, Musculoskeletal in 31%, CVS in 6% with Birmingham vasculitis assessment score (BVAS) being 19 ± 8.5. In EGPA (n=12) LRT symptoms were seen in 83%, URT in 58.3%, Renal in 41.6%, Mucocutaneous in 33.3%, Constitutional in 66.6%, Neurological in 33.3%, CVS in 16.7%, GI in 8.3% with BVAS being 17±10.6.13 patients were p-ANCA positive, 17 were c-ANCA positive. Improvement was seen in all the laboratory parameters after treatment with steroid immunosuppressant during the 3 month follow up.

**Conclusion:** Majority of our patients who were females had a mean age of 37 ± 11 years which is markedly lower than in rest of the world. Amongst AAVs, constitutional symptoms were most common. Most symptoms showed complete resolution at 3 months of treatment. Patients with GPA / EGPA, lower respiratory tract involvement was most common system involved. Significant association was found between ESR, CRP, Total protein and serum albumin levels, ANCA levels and BVAS calculated at presentation.

**Diagnostic Utility and Clinical correlation of Anti dsDNA, Anti Nucleosome antibodies and Complement levels in Systemic Lupus erythematos - A prospective study**

Sabarina Shannumugam, Rama Bhat, Indira Bairy
Kasturba Medical College, Manipal

**Background:** It is proven that nucleosomes are the major immunogen in the pathogenesis of SLE. The present study focuses on the analysis of clinical activity of SLE using SLEDAI2K30 score, diagnostic utility of anti dsDNA, anti Nucleosome antibodies and complement levels, and its correlation with SLEDAI 2K30 Score.

**Methods:** 73 newly diagnosed SLE cases, fulfilling the ACR criteria was included. Excluded were those on immunosuppression, those with active infection, pregnancy, liver disease, overlap syndrome. Using SLEDAI2K30 score, cases were classified as inactive (Score < 5) and active disease (Score > or equal to 5). ANA testing by immunofluorescence, ELISA of anti dsDNA and antineclease antibody, complement assay by nephelometry were done. SLEDAI2K30 score was correlated with antibody titres and complement levels. ROC curve plotted to define the cutoff for anti dsDNA, antineclease and complement levels in active SLE.

**Results:** Among the 73, 54 had active and 19 had inactive disease. ANA IF was positive in all cases, most common pattern being Homogenous. For diagnosing SLE, Sensitivity of anti dsDNA and anti Nucleosome antibody was found to be 90.4% and 76.7% respectively. Anti dsDNA had a stronger positive correlation with SLEDAI2K30 (r=0.725; p<0.01) than antineclease antibody (r=0.618 p<0.01). From the ROC curve for antibodies in active SLE cases, Sensitivity and specificity of anti dsDNA was 83.3% and 95.7% for the cut-off of > 480IU/ml; 87% and 95.7% for antineclease for the cutoff of > 79IU/ml. C3 (r=-0.601 p=0.01) had a stronger negative correlation with SLEDAI2K30 than C4 (r=-0.523 p=0.01). Sensitivity and specificity of C3 was 81.5% and 90.5% for the cut-off of <9mg/dl in active SLE cases. Anti dsDNA and antinucleosome antibody, complement levels, and its correlation with antibody titres and complement levels, and its correlation with SLEDAI 2K30 Score.

**Conclusion:** Anti Nucleosome antibody could be an additional and better tool for diagnosing active SLE cases.

**A Study on Retinal Toxicity in Patients Taking Hydroxychloroquine**

Arun Jacob, Vineeta Shobha, Puneth Isloor
St. Johns Medical College, Bangalore

**Introduction:** Hydroxychloroquine (HCQ) is an effective drug used in the treatment of various connective tissue disorders. Retinal toxicity is the major and most serious irreversible ocular side effect of HCQ. Multiple diagnostic modalities can be used for the early detection of HCQ retinopathy such as Spectral domain optical coherence tomography (SD -OCT), perimetry, fundus autofluorescence and multifocal electro-retinogram.

**Aims and Objectives:** To detect the retinal changes in patients taking HCQ and its comparison among different age groups, duration of use and cumulative dosage of the drug.

**Materials and Methods:** 220 eyes of 110 patients on HCQ for more than 1 year were considered in the study. Visual acuity, colour vision, SD-OCT and perimetry was carried out on all the patients. The patients were divided into groups based...
on the duration of usage of HCQ (1, 2, 3), cumulative dosage (1C, 2C, 3C) and the age of the patients (1A, 2A, 3A). Based on OCT and perimetry, results were compared between the 3 groups.

Observation: The age range of patients was 19 – 64 years. The mean (±SD) age of the study population was 38.50 (±8.92) years. There were 27 males (24.5%) and 83 females (75.5%). RA was the indication for HCQ usage in 68 (61.8%) patients and SLE in 42 (38.2%) patients. The mean cumulative dosage of HCQ was 382.91 grams with cumulative dosage ranging from 22.4 grams – 1460 grams. Comparing the OCT and perimetry results based on the duration of HCQ usage (1, 2, 3) showed statistically significant change among the three groups and based on cumulative dosage showed a statistically significant difference between group 1C and other two groups. There was no statistically significant difference on comparing with different age groups.

Conclusion: This study helps us to compare the effect of HCQ on the retina with respect to the duration of usage of the drug and cumulative dosage and emphasizes the need to screen patients on HCQ to detect pre-clinical changes in the macula.

Tropical Diseases

hs-CRP and serum complement C3 level as a marker of clinical severity and outcome in complicated and complicated Plasmodium falciparum malaria

D. Timung, A. K. Das, A. Sharma, A K Sen
Assam Medical College, Dibrugarh

Introduction: Malaria remains the most important parasitic disease globally. It is a public health problem in several parts of the country. Severe malaria, including cerebral malaria, severe malarial anaemia and placental malaria remains a major cause of global mortality. The complement, playing a central role of innate immune response to infection is a key determinant of malaria severity and outcome which along with CRP may be used as a predictor of clinical severity and outcome.

Materials and Methods: This study is a hospital based observational study carried out on 55 cases of Plasmodium falciparum infection during the period of June 2015 to May 2016. Clinically suspected cases were confirmed either by detection of asexual parasitemia on microscopic examination of peripheral blood smear or malarial antigen by paracheck or optimal test or both. Complicated malaria were defined according to WHO 2010 criteria. Patients with malarial infection other than Plasmodium falciparum, co-infection with other Plasmodium species, Pregnant women, co-morbidities like malignancy or rheumatological disorders and those on immunosuppressant were excluded from the study. A detailed evaluation of clinical history, physical examination and investigations and the results were recorded in a pre-designed proforma. The study was approved by the Institutional Ethical Committee.

Observations: Out of 55 cases, 34 were complicated and 21 were uncomplicated Plasmodium falciparum malaria with male to female ratio of 5:1.1. Cerebral malaria (41.2%), Acute renal failure (85.3%) and hepatic dysfunction (79.4%) were the major clinicopathological manifestation. Mortality in the study was 12 (21.8%) and all occurred in complicated Plasmodium malaria. Significant number of patients in cerebral malaria had low C3 and high hs-CRP compared to uncomplicated Plasmodium falciparum malaria. 47.1% Vs 4.8% (p value 0.0014) and 61.8% Vs 42.9% (p value 0.0099) respectively. Mortality rate in patients with low C3 and high hs-CRP was 50% and 100% respectively. Severe anaemia (<7g/dl) occurred in 44.1% of severe malaria.

Conclusions: Despite of availability of potent anti-malarials and initiative of control programmes malaria still remains a major cause of morbidity and mortality especially in the tropics. Increase in the drug resistance of the parasite, the insecticide resistance of its vectors, and human travel and migration have contributed to this resurgence. Hence, there is the need to investigate further into the pathogenesis, pathways, immune mechanisms and markers for prediction and thereby use of immunomodulators in future for better management.

Clinical co-relation of hematological and biochemical parameters in dengue seropositives

Ashish Raghav, Giri R, Verma RK, Kushwaha JS, Agarwal S, Kumar B
GSVM Medical College, Kanpur

Introduction: Dengue is caused by one of the four serotypes of the dengue virus (DEN-1, DEN-2, DEN-3 and DEN-4) also referred to as an arbovirus. This study was undertaken to assess the biochemical and hematological profiles and its clinical correlation with severity in dengue seropositive patients.

Material: Patients with h/o acute fever with IgM/NS1 positivity & age >15 yrs were included. Exclusion criteria included pts seronegative for dengue, age <15yrs, pts of malignancies, liver disease, MP and widal positive and pts on warfarin/heparin/aspirin. Amongst laboratory test, both non-specific hematological parameters (TLC, DLC, Hb, PCV, ESR, Platelet count) and biochemical parameters (KFT, LFT, Serum lipid profile, serum LDH) and specific (serology for antibody examination and viral isolation test) were used.

Observation:

1. The finding of thrombocytopenia (85%) was almost a universal finding validating the results of previous studies.

2. Associated findings were reactive lymphocytosis (43%), hemoconcentration (73%) leucopenia (52%).

3. Serum aspartate aminotransferase (89%) was raised compared to alanine aminotransferase (76%) levels in all forms of dengue infection.

4. Hypolipidemia (levels of S. cholesterol, LDL and HDL were decreased in 41%, 42%, 39% respectively) & raised serum triglycerides (77%) was seen more in severe form of dengue, (37%) in DHF and (3%) in DSS, which can be an independent predictor of clinical outcome.

5. Hypoproteinaemia (38%), hypoalbuminemia and hyperbilirubinemia (7%) were also observed in the study.

6. Increase in serum creatinine (22%) was observed (3% in DF, 4% in DHF and 1% in DSS.)

7. LDH was significantly raised in 50% of the pts with a range of 260-2420/u/l with a mean of 1335/u/l. It was increased in 26%, 23% and 1% of the pts with DF, DHF and DSS respectively.

Conclusion: The present study reveals that Thrombocytopenia, leucopenia, raised liver enzymes and alkaline phosphatase are invariably present in dengue cases. Serum LDH level was raised in significant number of patients and serum lipid levels (S cholesterol, HDL and LDL levels) were decreased although serum triglycerides levels were increased in significant number of patients and these directly correlated with disease severity as mortality was high in the patients in whom serum HDL was high and serum lipid level was low.

Clinical profile of Patients of Malaria in Western Up: Emerging Trends

Nishant Tayal, S.K. Jha, Abhishek Gupta, V.K. Goel, S.K. Virmani
Subharti Medical College, Meerut, Uttar Pradesh

Malaria is one of the most common disease which is responsible for a major public health problem in the Indian Scenario. The National Vector borne disease control programme of India reported 1.6 million cases and 1100 malaria deaths in the year 2009. But according to many reports this number is grossly under-reported.

Symptoms of malaria are generally non-specific and usually consists of fever, malaria, weakness, headache, backpain, nausea, vomiting and other GI symptoms. Also if left untreated it can also lead to several complications like cerebral Malaria, Hypoglycaemia, Hepatic impairment and renal impairment.

This study was designed to assess clinical features and laboratory parameters in hospitalized patients of malaria in Western U.P.

Material and Methods: This was an observational study taken in I.C.U. and medical wards of 950 bedded hospital of Subharti Medical College, Meerut. A total of 100 patients admitted to the hospital from July 2016-September 2016 were included in the study. All patients who tested positive for Malaria Parasite (either peripheral
smear positive or rapid diagnostic card test positive) were included in the study.

Detailed clinical examination with duration of illness, fever, chills and rigors, sweating, myalgia, splenomegaly, hepatomegaly, jaundice, decreased urination and altered sensorium were noted. In Laboratory investigations CBC, Blood Urea, Serum Creatinine, Blood Glucose and LFT was done of all patients. Optional investigations like widal, dengue, typhidot, NCCT, USG W/A, Blood C/S, Urine C/S, Lumbar Puncture, Leptospira were done on case to case basis.

<table>
<thead>
<tr>
<th>Table 1: Age and Sex Distribution</th>
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</thead>
<tbody>
<tr>
<td>Age group</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>20-29</td>
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<tr>
<td>30-39</td>
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<tr>
<td>40-49</td>
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<tr>
<td>50-59</td>
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<tr>
<td>&gt;60</td>
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</table>

Results: A total of 100 patients were enrolled during the study. Of these 79 patients had P. Vivax, 19 Had P. Falciparum and 2 had both P. Vivax and P. falciparum malaria as diagnosed by Peripheral Blood Smear or Rapid Diagnostic kit.

The maximum number of patients was in the age group of 20-29 years. The mean duration of illness was 5.32 days in Vivax and 6.61 in Falciparum.

Fever was observed in 98% of cases of P. Vivax and 2% patients presented with abdominal pain, chills without any history of fever; Sweating was present in 60% cases of Vivax and 68% cases of Falciparum; Myalgia and Headache was also observed commonly, 90% and 76% in Vivax and falciparum respectively.

A total of 10 patients were admitted to ICU care in state of altered sensorium, of them 5 were vivax positive, 4 were falciparum positive and 1 case was of mixed malaria. These cases were diagnosed as cerebral malaria after ruling out other possible etiologies.

Jaundice, as evidenced by increased Serum Bilirubin and deranged SGOT and SGPT was observed in 43% cases of vivax and 35% cases of Falciparum.

Renal Impairement was also observed 26% of vivax cases and 20% of falciparum cases. The predominant cause was deduced to be dehydration as there were no changes in CMD on USG and patient profile improved on rehydration.

Minimum Blood Glucose level recorded was 31 mg/dl in vivax and 39 mg/dl in falciparum malaria.

The mortality rate was 2.5% in vivax, 5% in falciparum. All those who expired were diagnosed to have cerebral malaria with Thrombocytopaenia with either renal or hepatic impairment. Also the duration of Illness was more prolonged to admission to hospital.

Radical cure with Primaquine was given to all vivax malaria patients after G6PD testing.

Discussion: The classical triad of fever, chills and rigors and sweating was found in 54% of cases which is less compared to other studies conducted previously.

Headache and myalgia was noted in 89% of cases this is much higher as compared to other studies conducted previously by Abdul rasheed et al.

GI symptoms were noted more commonly in patients of Falciparum Malaria (26%) than in Vivax (20%). This is in accordance with other studies.

Splenomegaly was recorded in 12% cases of vivax and 18% cases of falciparum. Many international studies have shown the percentage to be between 6-13%.

Hepatomegaly was noticed in 16% and 29% cases of vivax and falciparum respectively. This data is in divergence with som studies.5, 7, new and in concordance with studies from Colombia and Thiland.

Thrombocytopaenia was most important finding observed in 72% cases of vivax and in 75% cases of falciparum, while another 20% had platelet counts between 1, 50,000-1, 75, 000. A recent study from Mumbai had shown 89% for vivax and 80% in falciparum. Another study from South Asia showed it to be 80%.

None of the patient had any bleed from any site due to thrombocytopaenia. Anaemia was observed in 16% of the cases of vivax and 10% of the cases of falciparum. Almost all were either females or males of elderly age group.

Hypoglycaemia (BGS <60) was observed in 14% of cases out of which 10% had symptoms of hypoglycaemia. This is lower as compared to other study done previously in Colombia and South Asia.

Conclusion: The clinical an biochemical profile of Malaria is changing in the current scenario. Many cases are bound to be missed or misdiagnosed if only classical symptoms are being looked for. Clinicians should actively suspect malaria even in absence of chills and rigors or classical pattern of fever. An early diagnosis and treatment is vital for adequate management of patients and avoiding death due to malaria.

Table 2: Clinical features and Laboratory Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>P. Vivax n=79</th>
<th>P. Falciparum n=19</th>
<th>Mixed n=2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>98%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Chills and Rigors</td>
<td>72%</td>
<td>79%</td>
<td>100%</td>
</tr>
<tr>
<td>Sweating</td>
<td>60%</td>
<td>68%</td>
<td>50%</td>
</tr>
<tr>
<td>Myalgia abd Headache</td>
<td>90%</td>
<td>76%</td>
<td>100%</td>
</tr>
<tr>
<td>Spleenomegaly</td>
<td>12%</td>
<td>18%</td>
<td>50%</td>
</tr>
<tr>
<td>Hepatomegaly</td>
<td>16%</td>
<td>29%</td>
<td>50%</td>
</tr>
<tr>
<td>Hypoglycaemia</td>
<td>10%</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>Jaundice</td>
<td>43%</td>
<td>35%</td>
<td>100%</td>
</tr>
<tr>
<td>(S.BiL &gt;1.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal Impairement</td>
<td>26%</td>
<td>20%</td>
<td>100%</td>
</tr>
<tr>
<td>(S.Creat &gt;1.2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altered Sensorium</td>
<td>7%</td>
<td>20%</td>
<td>50%</td>
</tr>
<tr>
<td>Thrombocytopenia (&lt;1, 50, 000)</td>
<td>72%</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Anaemia</td>
<td>16%</td>
<td>10%</td>
<td>50%</td>
</tr>
<tr>
<td>GI Symptoms</td>
<td>20%</td>
<td>34%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Discussion: The classical triad of fever, chills and rigors and sweating was found in 54% of cases which is less compared to other studies conducted previously.

Splenomegaly was recorded in 12% cases of vivax and 18% cases of falciparum. Many international studies have shown the percentage to be between 6-13%.

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None of the patient had any bleed from any site due to thrombocytopaenia. Anaemia was observed in 16% of the cases of vivax and 10% of the cases of falciparum. Almost all were either females or males of elderly age group.

Hypoglycaemia (BGS <60) was observed in 14% of cases out of which 10% had symptoms of hypoglycaemia. This is lower as compared to other study done previously in Colombia and South Asia.

Conclusion: The clinical an biochemical profile of Malaria is changing in the current scenario. Many cases are bound to be missed or misdiagnosed if only classical symptoms are being looked for. Clinicians should actively suspect malaria even in absence of chills and rigors or classical pattern of fever. An early diagnosis and treatment is vital for adequate management of patients and avoiding death due to malaria.

A Study of Clinical, Laboratory Features and Bone Mineral Density in Newly Diagnosed Adult Patients of Celiac Disease

Ashwani Kumar Vyas1, Surendra Kumar2

1MGMC, Jaipur; 2SPMC, Bikaner

Aim: To study clinical, laboratory features, bone mineral density in newly diagnosed adult patients of celiac disease and other associated diseases in study population.

Material and Method: Study sample consist of eighty seven newly diagnosed adult patient of celiac disease. Detail medical history, drug history, physical examination, complete blood count, erythrocyte sedimentation rate, calcium profile, liver and renal biochemistry, 25-OH-D, Blood sugar were performed. Other investigations like RA factor, CRP, electrolytes, thyroid function tests and anti CCP were performed wherever indicated. Sera of all patients were tested for presence of IgA tissue transglutaminase (TTG) antibody by ELISA using commercially available kits. Antibody titer >50 units was considered positive. BMD of all newly diagnosed patients of celiac disease was done with Pronosco X-posure V.2 based on DXR.

Results: Most common presenting symptom was weakness, severe anemia (Hb <7gm%) was found in 46% of patients. Association between patients of celiac disease and osteopenia was highly significant (p<0.001). In present study diabetes mellitus was found in 10 no. of patients and hypothyroidism was found in 14 no. of patients.

Conclusion: Celiac disease is a systemic autoimmune syndrome involving a gluten induced chronic inflammation of small bowel mucosa, with extensive short and long term negative health consequences if untreated. Celiac disease is not age dependent and may become active at any age. Screening for celiac disease with serological testing is non invasive and should be considered in Indian patients with suggestive symptoms or refractory anemia or associated autoimmune conditions.
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5. **E/i ratio as a predictor of left ventricular remodelling in STEMI patients**, P Siva Satya Subramanayam, O Saisathish, L S R Krishna Nizam S Institute of Medical Sciences, Hyderabad, Andhra Pradesh

6. **Hyponatremia in Acute Decompensated Heart Failure**: Impact on Prognosis P Siva Satya Subramanayam, O Saisathish, L S R Krishna Nizam S Institute of Medical Sciences, Hyderabad, Andhra Pradesh

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18. **Alcohol Septal Ablation for Hypertrophic Obstructive Cardiomyopathy, outcome and perspectives in a case series of 3 patients**, Jit Brahmbhatt, Krunal Tamakuwala, Seema Naxane, Jayesh Rawal SBKS MIRC, Vadodara, Gujarat

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36. A Clinical Study of Arrhythmias During the First 48 Hours of Acute Myocardial Infarction
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74. Significance of serum ferritin in Myocardial Infarction Varalakshmi Rajanala, T. V. D. Sasi Sekhar
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75. Incidence, clinical profile and in-hospital outcome of patients of RVMI in IWI
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78. Study of Cardiac Arrhythmias in Acute Myocardial Infarction within 48 hours
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Priya Sakte, Satke AB, Satke PA, Chakarvarti S, Kotra S, Satke AB, Satke PA, Chakarvarti S, Kotra S.
Wanless Hospital, Miraj

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Priya Sakte, Satke AB, Satke PA
Wanless Hospital, Miraj

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Arundhati Barua, Manjunath, S.G.
K.J. Somaiya Medical College, Mumbai, Maharashtra

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Janardhana Naik CH, Nirmal Ramachandran, Sunilchandran
ART Centre General Hospital Kasargode, Kerala

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Donakonda Arun Kumar, Bhanukumar M, Abhiraj K
JSS Medical College, Mysore, Karnataka

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Pulin Kumar Gupta, PK Gupta, U Kamble, AK Gadapyle, S Lal, BB Rewari
PGIMER Dr RML Hospital Ghaziabad, Uttar Pradesh

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Akhil Krishna, Rajasekharan C, Sreekumar Government Medical College Trivandrum Thiruvananthapuram, Kerala

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Preet Shah, Ramapati Ram, Melvin Gonsalves
Jaslok Hospital and Research Centre Mumbai, Maharashtra

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Divya Bandlapalli, BSV Manjula, Deepak R, Anil Kumar
Gandhi Medical College Hyderabad, Andhra Pradesh

11. Study of Correlation between Hyperglobulinemia and Low CD4 Count in HIV Positive Patients
Aasish Peddu, Baby Nagapriya V, M. Mukhyaaparna Prabhu, Aasish Peddu
Kasturba Medical College and Hospital, Manipal University

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Chirag Gupta, Verma RK, Giri R, Gautam SK, Priyadarshini BP, Srivastav V
GSMV Medical College Kanpur, Uttar Pradesh

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Arnab Ghosh, Pankaj Pur AFMC, Pune, Maharashtra

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Chinthala Sivana Kumar, Govind Gangadharan, Vasudev Acharya, B.A. Shastri
Kasturba Hospital Manipal, Karnataka

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Neelabh Nayan, VK Sashidhinar
AFMC Pune, Maharashtra

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Mahesh Mahadevaiah, Shashidhara M
JSS Medical College, Mysore, Karnataka

17. HIV-Associated Vacular Myelopathy
Sushrut Fuladi, Vishal Anand Gupta
Seth GS Medical College, Mumbai, Maharashtra

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Divya Sahni, P. S. Ghalaut, Sudhir Atri, Mohini, Arvind Chahal, Varun Yadav, Akhilesh Yadav, Dheeraj Kumar
Pt BD Sharma PGIMS Rohtak, Haryana

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Sunny Pathania, Pankaj Puri, Navjot Kaur
Armed Forces Medical College, Pune, Maharashtra

20. Clinical Study of Anemia in HIV Patients on Zidovudine Based ART
Sabin Rajbhandari
AFMC Pune, Maharashtra
21. Headlight in Fog Appearance-A Typical Fundoscopic Finding in Retinal Toxoplasmosis in a Patient with HIV-2 Positivity
   Nilesh Kuchekar, Nivedita Moulik, Uma Sundar, Deepak Katara, Nitish Prasad, Ajay Karre, Pratik Patara, Aniket Wadal
   LTMGH, Sion, Maharashtra

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   Sachin Kumar, D Himanshu, Ruchika Tandon, Virendra Atam, K. K. Sawlani, Sudhir Kumar Verma
   King George Medical University Lucknow, Uttar Pradesh

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   Pankti Mehta, A.R. Pazeer, N. Bhasin
   Seth GS Medical college and KEMH Mumbai, Maharashtra

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   Ramshetty Sandeep, Yogitha Kempegowda Institute of Medical Sciences Bangalore, Karnataka

25. Reversible Blindness in Cryptococcal Meningitis- Improvement with Steroids- A case Report & Review of Literature
   Vaibhav Mathur, Abhishek Kumar
   Rajendra Institute of Medical Sciences Ranchi, Jharkhand

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1. Study of Clinical Profile of Dippers vs Non Dippers Using 24 Hours ABPM
   Gadurud Sudheer Kumar, ME Yeolekar, Sushija Sukhumaran, Manjunath Matam
   K J Somaiya Hospital Mumbai, Maharashtra

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   Harshita Sharma, Rajesh Manocha, Chandan Kumar, Saishele Banswali, Harshit Khosla
   VMMC and Safdarjung Hospital, New Delhi South Delhi, Delhi

3. To Study the Clinical Profile & Electrocardiography Criteria in Patients with Left Ventricular Hypertrophy and Correlate them with Echocardiography Findings
   Suraj Kodak, Vikram B Vikhe
   Dr D Y Patil Medical College and Hospital Pimpri, Pune, Maharashtra

4. A Study of Newly Diagnosed Hypertensive Patients with Special Reference to Carotid Intima Media Thickness
   Pranijit Mushahary, Dipankar Deb
   Silchar Medical College Silchar, Assam

5. Assessment of Insulin Resistance in Non-Diabetic Patients with Essential Hypertension
   Aasish Peddu, V Rathna Mitreyee, Jaya Prakash
   Kasturba Medical College and Hospital, Manipal University

6. Prevalence of Metabolic Syndrome in Patients with Essential Hypertension
   MD Wasim Alam, PK Arawal, Atul Kumar, M Ghosh, MP Singh, Taskeen Ahmed
   Katihar Medical College Katihar, Bihar

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   K Abhishek, G Usha
   Durgabai Deshmuk Hospitals, Mumbai, Maharashtra

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   Yogeesh Kumar Dubey, MP Singh, PK Arawal, Faiyaz Alam, Karan Bhargav, Abhishek Kumar
   Katihar Medical College Katihar, Bihar

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   Dharma Teja Dhulipalla, B Bhaskara Rao, D Harika, Gapanaraj, Sahithi
   NRI Medical College Guntur, Andhra Pradesh

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    Tushar Tamboji, Arup Dasbiswas, Shahu Ingole, Swati Naik, Rishi Jain
    Emcure Pharmaceuticals Ltd Pune, Maharashtra

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   Puppala LV Subbarao, M Sriraj Babu, YC Deepak, A Suryakanth, Madhuri Leela Jaya Gadi
   GSL Medical College, Rajahmundry, Andhra Pradesh

2. Splenic Tuberculosis with Myelophthisis- A Rare Association
   Kushal Kalvit, P Bhauumik, Karthik PL
   Agartala Government Medical College, Agartala, Tripura

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   Prashant Bhatale, A Dasgupta, S K Choudhury, M Debbarama, P Bhatale
   AGMC and GBPH, Agartala, Tripura

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   Murar Yeolekar, Arundhati Barua, Manjunath M
   K J Somaiya Medical College Hospital Mumbai, Maharashtra

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   Murar Yeolekar, Harshwardhan Dongre, Manjunath M
   K J Somaiya Medical College Hospital Mumbai, Maharashtra

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   Nayana Vijay, LiJo Mathew, NN Padmakumar
   Government Medical College, Kottayam, Kerala

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   Neha Roy, Arpit Jain, Namita Jaggi
   Artemis Hospital, Gurgaon, Haryana

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   Gargi Sasmal, Prabhat Kumar, Ratnakar Sahoo, Harish Gupta, Devyani Thakur
   Dr. RML Hospital, New Delhi, Delhi

   Jayanti Khura, N Sinha, R S Tonk, M Negi, S Shishir
   Dr RML Hospital, New Delhi, Delhi

10. Antibiotic Prescribing Practice of Family Physicians for Acute Respiratory Tract Infections
    Rahul Arora, Sandhya Das, Sarita Bajpai
    Subsidiary Health Centre Rattangarh, Punjab

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    Vineeth Thomas, Sowmya Sathyendra, Sudha Jasmine, G. Karthik, Sheena Ebenezer, Angel Miraclin, Gina Chandy
    Christian Medical College Vellore, Tamil Nadu
12. Case Series of Tuberculosis Presenting as ARDS
   Jayanta Datta1, Shubhayan Bhattacharya2
   1Uma Medical Related Institute Kolkata, West Bengal, 2School of Tropical Medicine, Kolkata

13. Team Management of Rhino-Orbital-Facial Mucormycosis
   Tanvi Batra
   Dr D Y Patil Hospital Pune, Maharashtra

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   Venkata Bhavesh Alluva, G Usha
   Durgabai Deshmukh Hospital and Research Centre, Hyderabad, Andhra Pradesh

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   Nagasheer Sharma, Suraj BM, Harsha NS, Supreeth SK, TS Ravindra
   Bhagwan Mahaveer Jain Hospital Bangalore, Karnataka

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   Shilpa Aawaree, Prahalad KA, Mohan Goudar
   JSS Medical College, Mysore, Karnataka

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   Manasi Bhowmik, DP Chakrabarti, S Saha, AK Bhattacharyya
   Tripura Medical College, Agartala, Tripura

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   Sinu RV, Sumesh Raj, Priyadarshini
   Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum

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   Harikrishnan Mohan, Balakrishnan Valliot, Sarin S, Jeena, Rajan P, Sarosh Kumar K, Kadeeja Beevi
   ACME, Pariyaram, Kerala

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   Prafulla Parikh, Vivek Bhat, Priti Chavan, Shashank Ojha
   Tata Memorial Centre Mumbai, Maharashtra

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   Abdul Mateen, BS Nagaraja
   Bangalore Medical College And Research Institute

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   Sinu RV, Vishnu RS, Elizabeth Jacob, Priyadarshini
   Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum

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   Teena Kanthiali, P. Renchalaiah, S. Sivaram Kannan, D. Damodaran
   Madras Medical College Tiruchirapalli, Tamil Nadu

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   Mrunmayee Deshpande, D. S. Asaonkar, R Desouza, Seema Kini, Harshal TNMC and BYL Nair Charitable Hospital, Mumbai, Maharashtra

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   Rahul Chowdary Kongara, Rahul Chowdary Kongara, Savitha, Sudagar Singh, K Vengadakrishnan, Sri Ramachandra Medical College and Research Institute Chennai, Tamil Nadu

27. Utility of FDG-PET Scan in the Diagnosis of Rare Cases Fever of Unknown Origin – A Case Report
   Raveendra Jakanur, Anil Kumar T, Ashwin Kulkarni, Vishvanath MSRM Bangalore, Karnataka

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   Aditya Duggal, Lovleen Bhatia, Amritpal Singh, Kamaldeep Kaur, Ajaypal GMC, Patiala, Punjab

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   Md Habibur Rahman, PK Agrawal, V Parmar, S Suman, K Bhargav, Md. Kaifee, M Sharma
   Kathir Medical College Kathir, Bihar

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   L Rohit Reddy, Kavitha Saravu, Shipra Rai, Sushma Belurkar, Stefan F. Weber, Sabine Belard
   Kasturba Hospital Manipal Manipal, Karnataka

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   Kiran B, Rame Gowda BR, Vimala Sheshadri Iyengar, Jagannatha K
   Adichunchanagiri Institute of Medical Sciences, Hyderabad, Andhra Pradesh

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   Vasireddy Nayana Tara, M. Gopalakrishna Pillai, Hassim Ahamed
   Amrita Institute of Medical Sciences Hyderabad, Andhra Pradesh

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   Arepalli Santosh Kumar, G Eswar, M Venkata Madhav
   Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation Vijaywada, Andhra Pradesh

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   Preet Shah, Pratit Samdani
   Jaslok Hospital and Research Centre Mumbai, Maharashtra

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   Kondal Rao Yedupati, Sadhna Sharma
   NRI Medical College Guntur, Andhra Pradesh

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   Nikitha Kunam, B Bhaskara Rao, Sireesha Gunnam
   NRI Medical College and GH Vijaywada, Andhra Pradesh

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   Ajit Sinha, ACCPC Ranchi, Jharkhand

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   Deependra Singh1, Naithani N2, Kumar RSV3, Gupta Salil4, AK Tiwari5
   1151 Base Hospital Guwahati, Assam, 2AFMC, Pune, 3Ch (Sc) Pune, 4Ch Bangalore, 5Bh Delhi

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   Karthik Balasubramaniam, Emmanuel Bhaskar
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   Seetha Katta, V Anjaneya Prasad, S Indraja
   PSIMS RF Guntur, Andhra Pradesh

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   Aswin S, Balakrishnan Valliyot, Sarosh Kumar KK, Sarin SM, Khadeeja Beevi, Muhammad Fawas, Ajith C Kurikose
   Academy of Medical Sciences Parivaram, Kerala

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   Navneet Arora, K Srijnash
   JJM Medical College Davanagere 577002, Karnataka
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Parag Maheshkar, Vishal Gupta, Meghna Vaidya, Parag Maheshkar
Seth GS Medical College and KEM Hospital
Mumbai, Maharashtra

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Ankita Menon, Dnyanesh Morkar, Rekha Patil
Jawaharlal Nehru Medical College Belgaum

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Santhi Chinnathambi, P Vasanthi, Namitha Narayanan, Mohammed Kalifa
Govt Stanley Medical College Chennai, Tamil Nadu

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Selva Saravanan Saminathan, Vidya Menon, Veena Menon, Merlin M
Amrita Institute of Medical Sciences Ernakulam, Kerala

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Pooja Motimath, Dnyanesh N Morkar, Rekha S. Patil
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Akshay Parikh, Krishna Prasad A, Y Satyanarayana Raju, Nageshwar Rao M, Uma Bala
Nizams Institute of Medical Sciences Hyderabad, Andhra Pradesh

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Mamdida Rvchandra, Thrilok Chander, Raja Rao
Gandhi Medical College Hyderabad, Andhra Pradesh

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Shunmugapriya K, Stanley medical college Chennai, Tamil Nadu

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Abhishek Agrawal, Saurabh Nigam, Anand, Anup Singh
Institutte of Medical Sciences BHU Varanasi, Uttar Pradesh

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dr Ram Manohar Lohia hospital New Delhi, Delhi

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dr Ram Manohar Lohia hospital New Delhi, Delhi

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Rajeshri Datta, D. Mondal, M.Saha, N.Sarkar
SSKM Hospital and IPGMEER Calcutta, West Bengal

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Satarupa Deb, Anindya Mukherjee, Arunansu Talukdar
Medical college, Kolkata, West Bengal

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SRM Medical College Hospital and Research Centre Kanchipuram, Tamil Nadu

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Shreeda Nagaraju, K G Prakash
Bangalore Medical College and Research Institute Bangalore, Karnataka

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Rahul Mahajan, Rama Garg, Sanjeev Kumar, Sweta, Kirandeep Kaur
GMC Patiala, Punjab

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Ramu Ramaswamy, Vasanthama Katham, Adithi Nagaraj
MVJ Medical College, Bangalore, Karnataka

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Anjana R S, Arun Narayan, Shashidhar M S Ramaiah Medical College Bangalore, Karnataka

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Bhanu Dhiraj, Smita Gupta
Shri Ram Murti Smarak Institute of Medical Sciences Bareilly, Uttar Pradesh

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Prashansa Sadashiv, Sowmya Sathiyendra, Maria Koshy, Angel Miracilin, Vignesh
Christian Medical College Hospital Vellore, Tamil Nadu

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Sreedevi T, Yeshavanth Ganapathi
SS Institute of Medical Sciences Devangere, Karnataka

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Chethan G D, A. P. Thippeswamy
JJMMC Davangere, Karnataka

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Jerry Abraham Joseph, Arunagiri R
Tirunelveli Medical College

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Sanjeeva Reddy Naga, Alka Ganesh, V Mathew, Binu M G, Neelakantan
G Kuppuswamy Naidu Memorial Hospital Coimbatore, Tamil Nadu

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Amogh Chandrashekar, Manjunath R
Kempegowda Institute of Medical Science Bangalore, Karnataka

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Amogh Chandrashekar, Thirhaneker Mukerjee
Kempegowda Institute of Medical Science Bangalore, Karnataka

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Amulya Visweswar
Dr BR Ambedkar Medical College and Hospital Bangalore, Karnataka

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Yogesh Shilimkar, P Rathode, P Darole, U Sundar, N D Moulick
LTMMC, Mumbai, Maharashtra

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Yogesh Shilimkar, N Pandey, C Limaye, U Sundar, N D Moulick
LTMMC, Mumbai, Maharashtra

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Anju Susan Jacob, Angel Miracilin, Grace Rebekah, Thambu David Sudarsanam
Christian Medical College, Vellore, Tamil Nadu

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Neha Pandey, Jalees Fatma, Ruchita Sharma, Ritu Karoli, Zea Siddiqi
Eras Lucknow Medical College, Lucknow, Uttar Pradesh

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Nayana HK, Ramchandra Prabhu
Kempegowda Institute of Medical Sciences Bangalore, Karnataka
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Deepthi Ala, S. V. Ramana Murthy, P. Vijay Kumar, R. Satya Teja
GSL Medical College Rajahmundry, Andhra Pradesh

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Kshitiz Vashista, Muzamil MMIMSR, MMU, Mullan, Ambala, Haryana

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Anup Singh, Abhishek Agarwal
Institute of Medical Sciences, Varanasi, Uttar Pradesh

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Gurmeet Kaur Thakur, Das Cipla Ltd, Mumbai, Maharashtra

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Mukesh Palsania, Monika Maheshwari, Sanjiv Maheshwari
JLN Medical College, Ajmer, Rajasthan

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Akshay Parikh, Krishna Prasad A, Y Satyanarayana Raju, Nageshwar Rao M, Uma Bala
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Arun Kumar Dindi, Alladi Mohan, D. Prabhath Kumar, J. Harikrishna, B. Siddhartha Kumar, T. C. Kalawat
Sri Venkateswar Institute of Medical Sciences Tirupati, andhra pradesh

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All India Institute of Medical Sciences, New Delhi

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Raghavendra B
AJIMS Mangalore, Karnataka

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Harish Reddy Lingareddy, Pradeep T V
JJMMC Davanagere, Karnataka

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Harish Reddy Lingareddy, Anoosha G, Suresh S R
JJMMC Davanagere, Karnataka

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Mukesh Verma, Sanjay Kumar
Ladhy Hardinge Medical College, West Delhi, Delhi

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Karan Bhatia, B.M.S Lamba, Mahesh Kakkanale, S. Mittal
RML Hospital and PGIIMER South Delhi, Delhi

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Abhishek Mittal1, Mohd. Imran Chouhan1, Vishwali Gulati1, Ulka Kamble1, Pullin Kumar Gupta1, B M S Lamba, Aniket Mittal2
1Dr Ram Manohar Lohiya Hospital New Delhi, Delhi, 2Medical Graduate, MR Medical College, Guwahati

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Dilip Bera, Tapan Jyoti Sarkar, Amitava Mazumdar, Santasubhra Chatterjee, Nadee Chowdhury, Honey Maity
RKMSVP VIMS, Calcutta, West Bengal

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Mujeeb Nasrul, Thippeswamy
JSS Medical College, Karnataka

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Preet Shah, Ramapati Ram, Abhijit Prasad
Jaslok Hospital and Research Centre Mumbai, Maharashtra

92. Emperors New Spots
Selva Saravanam Saminathan, Vidya Menon, Veena Menon, Merlin M
Amrita Institute of Medical Sciences, Ernakulam, Kerala

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Kishore Kumar Talukdar, Prasanta Kumar Bhattacharya, Md Jamil, Monaliza Lyngdoh, Akash Roy
North Eastern Indira Gandhi Reserch Institute and Medical Sciences Shillong, Meghalaya

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Rachana Warrier, VK Sashindran
AFMC, Maharashtra

95. A Case of Dengue Hemorrhagic Fever with Psoas Muscle Hematoma
Sharath Thomas Roy, Legha R, Shahul Hameed
Government TDMC, Alappuzha, Kerala

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Afsar Fatima, Nagaraj N, Y J V Reddy
PES Institute of Medical Sciences and Research Kuppm, Andhra Pradesh

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Karthik Balasubramaniam, Emmanuel Bhaskar, R Sudhaag Singh
Sri Ramachandra Medical College Chennai, Tamil Nadu

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Vasireddy Nayana Tara, M Gopalakrishna Pillai, Hasim Ahamed
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Arun singh Tejavath, T. Murali Venkateswararao, Sadhna Sharma, B. Bhaskararao, Tejaswi Jallepalli
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Abhishek Agrawal, Sharad Dev, Anup Singh, Saurabh Nigam
Institute of Medical Sciences BHU Varanasi, Uttar Pradesh

101. Unusual Presentation of TB Arthritis
Anju Rose George, Mathew, Reema Susan, Sajith Varghese, R N Sharma
Pushpaganji Institute of Medical Science and Research Centre Thiruvalla, Kerala

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Gokul MS, Abraham Varghese, Sunil Mathew, Reema Susan, Sajith Varghese, R N Sharma
Pushpaganji Institute of Medical Science and Research Centre, Thiruvalla, Kerala

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Nithin Terence1, Tony Philip, Julie C Abraham, Koshy Nithin, R. N. Sharma
Pushpaganji Institute of Medical Science and Research Centre, Thiruvalla, Kerala

104. A Case of Dengue Fever with Cerebellitis
Amal Dev, Tony Philip, Julie C Abraham, Koshy Nithin Thomas, R N Sharma
Pushpaganji Institute of Medical Science and Research Centre Thiruvalla, Kerala

105. Clinical features of Chikungunya infection with or without Dengue infection: a Case Series
Swathi Jami1, Karun Jain1
1Lady hardinge medical college, Delhi, 2Puspanjali Medical Centre, New Delhi

106. Poster presentation on Japanese encephalitis.
Akshay Shewale, J. Dadwad, M. Mahashabde
Dr. D Y Patil Medical College Pimpri Pune, Maharashtra

107. Varied presentation of two cases of melioidosis – A case series
Kishore Chandra Korada, Krishna Prasad A, Raju YSN, Nageswara Rao M, Paramyothi Nizams Institute of Medical Sciences, Hyderabad, Andhra Pradesh
108. Sickle cell β thalassaemia and infective endocarditis: A Case Report and Review of Literature
Chitrakala Naik, Sujata Devi
VSS Medical College, Burla, Orissa, AIMSS, BBSR

109. Toxic Epidermal Necrolysis - A Caution before Prescribing Anti-Epileptics
Vikas Kumar Patel, Thabish Syed, Dilip Ahir, Dilip Kumar Sharma
NIMS Medical Hospital and College, Jaipur, Rajasthan

110. Paratrophic fever - A comprehensive study of clinical laboratory profile and antibiotic sensitivity
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JMJ Medical College, Davanagere, Karnataka

111. Evaluation of Cardiovascular Manifestations in Severe Leptospirosis
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KEM Medical College and Research Institute, Pune, Maharashtra

112. Scrub Typhus Presenting as Capillary Leak Syndrome
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JIM Medical College, Davanagere, Karnataka

113. Rickettsial Fever Presenting as Purpura fulminans - A Case Report
Subodh V S, Usha Padmini, Selvamani, K Sivakumar
Coimbatore Medical College, Coimbatore

114. Malaria Vivax: A Rare Presentation
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Coimbatore Medical College, Coimbatore

115. Comparative study between falciparum and vivax malaria in Eastern India: Breaking a myth
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116. A Prospective Study of Clinico-pathological and Biochemical Changes in Patients of Dengue Fever: A Vision From Eastern India
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117. Spontaneous Splenic Abscess in an Immunocompetent Adult: 2 Case Reports
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TNMC and Byl Nair Hospital, Mumbai

118. Rhino Cerebral Palatal Mucormycosis In Newly Detected Diabetic Patient
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Ambika Mohanty, P K Khora, P Khatau, SS Panda
Kalinga Institute of Medical Sciences, Bhubaneswar, Orissa

120. Interesting case of PUO
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121. A Rare Presentation of Melioidosis
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A J Institute Medical Sciences Mangalore, Karnataka

122. A Rare Case of Intramedullary Tuberculoma: Complete Resolution After Medical Treatment and Role of MRI in Diagnosis and Follow-up
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Kamineni Institute of Medical Sciences, Hyderabad, Andhra Pradesh

123. Study of clinical profile and outcome of dengue fever in relation with morbidity and mortality
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124. Dengue Fever: An Unusual Cause of Quadriaparesis
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125. Severe Sepsis in Scrub Typhus
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126. Dengue Fever Unmasking Ulcerative Colitis
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127. A Rare Presentation of Plasmodium Falciparum Malaria as Sensorineural Hearing Loss and Trophozoites in Bone Marrow - A Cause of Persistent Fever
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128. A rare case of pancycopenia
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129. A Rare Intracranial Space Occupying Lesion
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Amrita Institute of Medical Sciences and Research Centre Kollam, Kerala

130. A case study of management of neutropenic sepsis due to immunosuppressant’s in a patient of systemic sclerosis
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131. Ebstein Barr Virus: an Unusual Combination of Encephalitis, Cholestatic Hepatitis in Older Adult
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Kempegowda Institute of Medical Sciences Bangalore, Karnataka

132. Utility of Serum Free Calcium as a Predictor of Severity in Dengue Fever
Sphoorti P Pai, Jayachandran C
Bangalore Medical College and Research Institute Bangalore, Karnataka

133. Case of Bilateral Orbital Tuberculosis With Meningitis: A Rare Case
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Bangalore Medical College and Research Institute Bangalore, Karnataka

134. A Rare Case of Cutaneous Crypto-coccosis in HIV
Ramshetty Sandeep, Yogitha Kempegowda Institute of Medical Sciences Bangalore, Karnataka

135. Unusual Presentation of A Case of Leptospirosis
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Bangalore Medical College and Research Institute Bangalore, Karnataka

136. Concomitant Occurrence of Tubercular and Cryptococcal Meningitis in Immunocompetent Patient
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137. Atypical Presentation of Melioidosis - A Case Series
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138. Cardiac Echinococcosis - An Uncommon Complication of Hydatid
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139. Leptospirosis Pancreatitis - A Case Series
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1. Knowledge, Attitude & Practices of Relatives/Spouse(S) of Patients with ESRD Towards Organ Donation Chander Shekher Aggarwal, Om Prakash Kalra, Alpana Raizada, Sunil Agrawal Ucms and GTBH Delhi

2. Bilateral Proximal Lower Limb Deep Vein Thrombosis in a Patient of Primary Membranous Nephropathy Priti, N Sinha, A K Malhotra, V Kumar Dr RML Hospital New Delhi, Delhi

3. Clinical Outcome of Acute Kidney Injury in Hospitalised Patients Sana Shadab, RS Ahlawat, H.S. Hira Maulana Azad Medical College Central Delhi, Delhi

4. Renal Biopsy in Patients with Diabetes Mellitus–Indications and Histologic Findings Arjun Rajendran, Lakshmi Nagendra K S Hegde Medical Academy Mangalore, Karnataka

5. Role of Serum C-Reactive Protein Levels in Differentiating Upper and Lower Urinary Tract Infection Aaish Peddu, Rohini Koya, Shubha Sheshadri Kasturba Medical College and Hospital, Manipal University Visakhapatnam

6. An Enigmatic Duo of Klinefelter’s Syndrome and Nephrotic Syndrome: Literature Unraveled Avinash Rao U, H K Aggarwal, Deepak Jain Pt B D Sharma PGIMS, Rohtak, Haryana

7. A Rare Case of Hypokalemic Paralysis- Adult Variant Bartter’s Syndrome Suresh Kumar Yenna, K B R Shatry, Suneel Kumar, Anuradha Gandhi Medical College Hyderbad, Andhra Pradesh

8. A Rare Cases of Hypokalemic Periodic Paralysis Shalini, Vinayasekhar, S Kondal Reddy, B Srinivas, B Shalini Gandhi Medical College Hyderbad, Andhra Pradesh


10. Exertional rhabdomyolysis induced acute kidney injury Abhishek Kumar, P K Agrawal, Vishal Parmar, Karan Bhargav, Yogesh Kumar Dubey, Saad Bin Saif Kathir Medical College Kathir, Bihar

11. Evaluation of Thyroid Dysfunction in Patients with Chronic Kidney Disease Veeramani Kartheek A S, A Siva Shankar, V Kiran, M.V.V. Tirumala Rao Rangaraya Medical College, Kakinada

12. Acute Kidney Injury Outcome in Elderly Kavya Thota, S.V. Ramana Murthy, B Siva Kumar GSL Medical College Rajahmundry, Andhra Pradesh

13. A Rare Case of Gitelman Syndrome Kavya Thota, B. Sivakumar, Ch. Abhinav, M. Sri Haribabu GSL Medical College Rajahmundry, Andhra Pradesh


15. Evaluate Neutrophil Gelatinase Associated Lipocalin (NGAL) as a Marker of Early Development of Acute Kidney Injury in Adult ICU Patients Shunya Sampad Gojanur, Manjunath S Shetty, Suhas C, K.A. Sudharshana Murthy JSS Medical College Mysore, Karnataka

16. Incidence, causes and outcomes of acute renal dysfunction in first three months of renal transplant: A hospital based study Suresh Chawla, BS Gupta, A Jain, S Gupta, S Kalra Fortis Escorts Hospital Jaipur, Rajasthan

17. A Study on Assessment of Physical and Mental Health in Patients with Chronic Kidney Disease Ahmed Khan, TVS Sasi Sekhar Dr Pinnamaneni Siddhartha Institute Vijaywada, Andhra Pradesh


19. Evaluation of Thyroid Dysfunction in Patients with Chronic Kidney Disease Veeramani Kartheek A S, A Siva Shankar, V Kiran, M.V.V. Tirumala Rao Rangaraya Medical College, Kakinada

20. Is it Weak Due to the Leak Pouja Banerjee, Partha Sarkar, Ajitava Dutta Calcutta National Medical College Calcutta, West Bengal

21. A Clinical Profile of Acute Kidney Injury in Patients with Sepsis Admitted to a Tertiary Care Hospital Raghav Arora, Jales Fatma, Ruchita Sharma, Ritu karoli, Zeba Siddiqui Eras Lucknow Medical College and Hospital Lucknow, Uttar Pradesh

22. Hemotaxic Snake Bite Induced AKI Ahmed Khan, S Ravi Shankar Dr PSIMS Gannavaram

23. A Case of Acute Kidney Injury Binu Bal Singh, Josemon George Kottayam Medical College, Kottayam, Kerala

24. AKI in Pregnancy Spoorthi Kolla Asarvijaywada, Andhra Pradesh


27. A Case of ANCA Associated Vasculitis Nithin K, K S Maniappan Md, V Uvarajmuruganandam, P S Manshur Coimbatore Medical College Thrissur, Kerala

28. Idiopathic nodular glomerulosclerosis— Not for the faint-hearted Dhirendra Yadav, Yogesh Shilimkar, Shreyasi Bose, Nivedita Moulick, Utkarsh Deshmukh Lokmanya Tilak Municipal Medical College Mumbai, Maharashtra
29. To Know the Prevalence of Heart Failure in Chronic Kidney Disease-5 Patients on Maintenance Hemodialysis in Tertiary Care Centre Gnazla Siddiqui, Ashish Chakraborty, Gautam Majumdar Calcutta Medical Research Institute Kolkata, West Bengal

30. Hypermagnesemia in AKI and CKD Shubham Dubey, Dhawale R G R D Gardi Medical College Ujjain, Madhya Pradesh

31. Hypermagnesemia in Patients of AKI and CKD- A Cross Sectional Study Shubham Dubey R D Gardi Medical College Ujjain, Madhya Pradesh

32. Serum Potassium Level Changes as Arrhythmia Contributing Factor in Pre & Post Dialysed Chronic Kidney Disease Patients Dilshad Begum, SM Imroz, Indira Priyadarshini, B. Balasubramanamy SVM Tirupati, Andhra Pradesh

33. Vasculitis and Renal Cell Carcinoma Paidi Suresh Kumar, S Sreenivas, B Srinivas Rao King George Hospital Andhra Medical College Visakhapatnam, Andhra Pradesh

34. Procalcitonin in Acute Pyelonephritis: A comparative study between diabetic Vs non-diabetic Siva Krishna Sirapalli1, Vamsi Krishna1, Sree Bhushan Raju2 1Maharajas Institute of Medical Sciences Visakhapatnam, Andhra Pradesh, 2Nizams Institute of Medical Sciences

35. Role of PLA2R Antibody in the Diagnosis of Lupus Membranous Nephropathy- Absence of Typical Histology Hussain Shaik, Raju Badiger JNMC Belgaum, Karnataka

36. Tuberculosis and Chronic Kidney Disease- A Rare Manifestation Neelkanth Girenavar, Ramachandra Prabhav, Sunil R. Kempegouda Institute of Medical Sciences Bangalore, Karnataka

37. Tuberculosis in Chronic Kidney Disease Patients Neelesh Kumar S Shah, Gajanan Gondhali, Srikant Gadwalkar 1Maharajas Institute of Medical Sciences Visakhapatnam, Andhra Pradesh, 2Nizams Institute of Medical Sciences


39. Study of Serum Cystatin C and Serum Creatinine as markers in Early Prediction of AKI in ICU Patients in a Tertiary Care Centre Mysore Ramesh PK, Suneetha Kalari Mysore Medical College and Research Institute Mysore, Karnataka

40. Analysis of Coronary Artery Disease and Associated Risk Factors in Patients with Chronic Kidney Disease Aseem Garg, A. Pathak, L. Jain, M. K. Parashar NSCB MCH Jabalpur, Madhya Pradesh

41. Thrombotic Angiopathy as a Complication of Acute Pancreatitis Gurulingesh Metipatti, V A Arun Armed Forces Medical College Pune, Maharashtra

42. A Rare Case of Toxic Fumes Inhalation Associated with Anca Vasculitis Nandita Agrawal, Edwin Fernando, Nalini Kumaravelu Stanley Chennai, Tamil Nadu

43. An Interesting Case of Atypical Presentation of Membranous Glomerulonephritis Neelkanth Girenavar, Ramachandra Prabhav, Sunil R. Kempegouda Institute of Medical Sciences Bangalore, Karnataka

44. A Rare Case of Rapidly Progressive Renal Failure C3 Glomerulonephropathy Veluru Rakesh, Pradeep, Gopal Rao, Mohan Srivastav KVG Medical College and Hospital Sullia, Karnataka

45. A Case of Gitelman Syndrome with Onset During Adulthood Lalith Kolukonda, K Venkateswarlu, Pramod Reddy, Shiny Billa Katuri Medical College and Hospital Guntur, Andhra Pradesh

46. Hus With Pancreatitis Rachana Warrier, TK Murari AFMC, Maharashtra

47. An Interesting Case Splenic Abscess with Acute Kidney Injury Sasikala B, PN Jikki, S Sailaja, S Ananth Kurnool Medical College Kurnool, Andhra Pradesh

48. To Study the Thyroid Function in Patients with Chronic Kidney Disease Manoj Malav, J. Punekar, A. A. Singh NSCB MCH Jabalpur

49. Study of Spot Urine Protein Creatinine Ratio with 24 Hour Urine Protein for Estimation of Proteinuria in Chronic Kidney Disease Stage 3 and 4 Raghavendra BJ, Rangaswamy Mysore Medical College Mysore, Karnataka

50. Two interesting cases of Barter syndrome Aravind VN Government Medical College Kottayam, Kerala

51. Study to Correlate Hemoglobin Hepcidin and Iron Homeostasis in CKD Patient on Erythropoietin Stimulating Agents Anil Kumar, S.K. Sonkar, Gyanendra Kr, Sonkar, Vivek Bhosale, Ashim Ghatak King George Medical University Lucknow, Uttar Pradesh

52. Study of Peripheral Neuropathy in End Stage Renal Disease Patients on Haemodialysis Rohan Gayakwad, T. N. Dubey, K.K. Kawre, N. Shrivastava Gandhi Medical College Bhopal, Madhya Pradesh

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1. A Rare Case of Creutzfeldt-Jacob Disease Puppala LV Subbarao, SV Ramana Murthy, S Venu, Madhuri Leela Jaya Gadi GSL Medical College Rajahmundry, Andhra Pradesh

2. Clinico-radiological profile of Stroke Patients- as observed at a Teaching Hospital in Eastern Odisha Baisunathan Panda S Kabi, R Padhi, B N Panda, S K Dhar, Subhransu Sekhar Jena, A Kumar, Kameswari, Payel Kumar, S S G Mohapatra IMS and SUM Hospital Bhubaneswar, Orissa


4. Outcome of Serum HS-CRP Levels Among Ischemic Stroke Patients and Healthy Subjects Swapnil Jain, C L Naval, M K Agarwal, Pradeep Mital, Anil Mangal, Abhishek Agarwal SMS Medical College Jaipur, Rajasthan

5. An Interesting Case of Autoimmune Encephalitis Arundhati Barua, Manjunath, N.H. Gill, S.G. Godbole K.J. Somaiya Medical College Mumbai, Maharashtra

6. A Study of Differentiation between Ischaemic and Haemorrhagic Strokes using Clinical Stroke Scores Anirudh Raghwendra Jagalur, Anirudh Raghwendra Jagalur, Gayatri Harshe D Y Patil Medical College Kolhapur, Maharashtra
7. A Rare Case of Late Postpartum Eclampsia with Posterior Reversible Encephalopathy Syndrome Presenting as Stroke
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8. An Unusual Presentation of Acute Flaccid Quadriaparesis
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9. A Case of Klinefelter Syndrome with Hodgkin Lymphoma Presenting as CIDP
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10. Primary CNS Lymphoma : An Uncommon form of Non-Hodgkins Lymphoma
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11. Thalassemia Intermedia with Post Splenectomy with CVA (RT Sided Hemi Paresis) MCA Infarct
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12. ECG and 2D-Echo Changes in Patients Suffering from Acute Ischemic Stroke
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13. Acute ischemic Stroke- First Presentation of Polycythemia
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14. Multiple System Atrophy-P Type: A Case Report
Shriji Kumar Thakkar, Dhawale R G, Gawarinak S, Jain M, Sharma A, Jain A
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15. Pure Motor Monoparesis Secondary to JAK 2 Negative Polycythemia Vera and Hyperhomocysteinemia: A Case Report
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Mahavir Hospital and Research Center, Hyderabad, Andhra Pradesh

16. A Study of Electroencephalographic Changes in Cirrhotic Patients With Minimal Hepatic Encephalopathy
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18. The Queer Striking the Young: Anti-Nmdar Encephalitis
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19. Clinically Isolated Syndromes
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20. Splenial Hyperintensity as a Dot Sign in Dengu Encephalitis
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21. A Rare Cause for Stroke in Young Kyatham Vivek
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22. Study of the Clinical Profile of Cerebral Venous Sinus Thrombosis
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23. A Rare Cause of Eight and a Half Syndrome
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Institute of Medical Sciences and Research Kuppam, Andhra Pradesh

24. Recurrent Bacterial Meningitis Secondary to Congenital Frontoethmoid Bony Defect with Meningoencephalocele in a Fifteen Year Old Boy
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25. Trocheleitis and Migraine- Clinical Features and Management
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26. TB Meningitis Impersonator: Neuro Kikuchi’s: An Interesting Case of Non-Infectious Meningitis
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27. An Interesting Case of Epilepsy
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28. An Interesting Case of an Antenatal Women Presenting in Altered Sensory –Wernickes Encephalopathy
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29. Study of Carotid Intima-Media Thickness and HSCR in Cases of Stroke
Monika Pathania¹, Vyas Kumar Rathaur², Minakshi Dhar³, Ravikant�, Venkatesh⁵, Rahul Goel⁶
¹AIIMS Rishikesh Rishikesh, Uttarakhand, ²Government Doon Medical College, ³AIims Rishikesh, ⁴Subharti Medical College Merut

30. A Rare Case of Cerebral Venous Thrombosis Associated Stroke in HIV Positive Female
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31. A Case of Wernekink Comissure Syndrome
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32. A Case of Infarction of Cerebellar Nodulus
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33. A Case of Neuromyelitis Optica Spectrum Disorder
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34. A Study of Seizures in Patients of Medical Intensive Care Unit
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35. Multiple Cranial Nerve Palsy in an Obese Unfolding the Enigma
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36. Ketotic Hyperglycaemia: A Rare Cause of Ballismus
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37. A Case of Headache
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38. Study of Hyperhomocysteinaemia in Relation with Carotid Intima Thickness in Ischemic Stroke Patients
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39. Sudden in No Mans Land
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40. A Case of Cruveilhier Atrophy
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51. Assessment of Autonomic Dysfunction in Acute Stroke Patients at a Tertiary Care Hospital
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55. Clinical study of hyponatremia in stroke patients
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56. Study of Carotid Intima Media Thickness in Patients with Acute Ischemic Stroke and its Correlation with Risk Factors of Ischemic Stroke-A Case Control Study
Savitha Vijayakumar, Savitha Vijayakumar, Rajeev, Krishnappa JSS Medical College Mysore, Karnataka

57. A Rare Case of Oculopatalal Myoclonus
Subhash Deb, Aravinda R V, Vishal Gaikwad, Arun Agarwal, Ashish P Dudhe, Somnath Dasgupta Burdwan Medical College, Calcutta, West Bengal

58. A Case of Subacute Sclerosing Panencephalitis
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59. A Rare presentation of Rasmussen’s Encephalitis in an Adult Female
Sushanth Vemuganti, A S Shastry, M K Sagar Maharajahs Institute of Medical Sciences Warangal, Andhra Pradesh

60. Assessment of Mean Platelet Volume in Ischemic Stroke and its Correlation with Prognosis and Severity
Jerryn Raj Selvyn, S G Ramya, S N Meenakshi Sundari, S K Nellaiappa Ganesan, V Sundaraveladivelu, V Ruckmani SRM Medical College and Research Centre Kanchipuram, Tamil Nadu

61. Effect of Nature of lesion on Glycemic alteration in non diabetic individuals after TIA or Stroke
Rohit Rajeevan Chodaparambil K, Rajesh S AJ Institute of Medical Sciences Mangalore, Karnataka

62. Delayed appearance of MRI lesion in acute ischemic stroke
Sanjeev Kumar1, Ajay Panwar1, Gulshan Battan1,1 KGMU Lucknow, Uttar Pradesh, 1 MCM Hospital, Warangal, 1 Sarvodaya Hospital, Faridabad

63. Marchiafava Bignami Disease
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64. Moya Moya Disease
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65. Huntington’s chorea- A case report with typical family tree
Amarender Reddy, B S V Manjula, Anil Kumar Gandhi Medical College, Secunderabad

66. A Case of Rapid Cognitive Decline
Damodar Krishnan1, Aswin Mathew2, Athulya Asokan1, R. N Sharma1,1 Mary Queen Hospital Kanjirapally, Kottayam, Kerala; 2 Pushpagiri Institute of Medical Sciences

67. Simultaneous Cerebral Artery and Venous Sinus Infarct In Young Male
Seetha Katta, Gowtam M, Vamsi Krishna K, Sandeep V PSIMS RF, Guntur, Andhra Pradesh
56. A Case Report on Neurologic Wilsons Disease
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57. Intracranial aneurysm with tuberculous meningitis
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58. Assessment of Ischemic Stroke-Prospective Study
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59. Cerebral infarction-a rare complication of acute pancreatitis
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60. Serum Bilirubin Levels in Ischemic Stroke
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61. A Case of L-2 Hydroxy Glutaric Aciduria (L2-HGA)
S Ch Bhaskar Dorapudi, S. V. Ramana Murthy, Y. C. Deepak, DSC Bhaskar GSL Medical College Rajahmundry, Andhra Pradesh

62. TB Meningitis With Myelitis
Kavi Poornima Duraisamy, KCV Murthy, Y. C. Deepak, DSC Bhaskar GSL Medical College Rajahmundry, Andhra Pradesh

63. TB Meningitis With Myelitis
S. V. Ramana Murthy, Y. C. Deepak, DSC Bhaskar GSL Medical College Rajahmundry, Andhra Pradesh

64. A Rare Presentation of Cysticercosis
Raja Rao, MSSR Reddy, Amrita Gotur, Guru V. Sharath Kumar, J Sharath Kumar, SMSV, Vikramvardhan R Andhra Medical College, Visakhapatnam, Andhra Pradesh

65. The queer striking the young- anti NMDAR encephalitis
Garg Gargi, Prabhat Kumar, Rashid Mittal, Ratnasah, Harish Gupta, Ghazal Tansir, Jyotsana Dr RML Hospital New Delhi, Delhi

66. A Rare Presentation of Cysticercosis
Raja Rao, MSSR Reddy, Amrita Gotur, Guru V. Sharath Kumar, J Sharath Kumar, SMSV, Vikramvardhan R Andhra Medical College, Visakhapatnam, Andhra Pradesh

67. Study of Clinical Profile and Radiological Features in Cerebral Sinus Venous Thrombosis
Yamini Priyanka Pentakota, V Kiran, M.V. V. Tirumala Rao Rangaraya Medical College Kakinada, Andhra Pradesh

68. Spinal Subarachnoid Hemorrhage: A Case Report
Lidiya George, Sujeev H S Government Medical College Kottayam, Kerala

69. A Case Report of Quinolone Induced Seizures
Arum Sri Parameswaran, Sudeep K, Pramod V K, Ramesan, Rijith Kannan, Jijo Thomas Academy of Medical Science Pariyaram, Kerala

70. Internal cerebral vein thrombosis with unilateral thalamic oedema- A case report
Sourya Sourab Mohakuda Armed Forces Medical College, Pune, Maharashtra

71. Lafora Body Disease
Karthik Andela, Arpita C, Y. J. Visweswara Reddy PES Institute of Medical Sciences and Research Chittor, Andhra Pradesh

72. HSV Encephalitis Presenting as Alcohol Withdrawal seizures
Amrita Gotur, Chaughule H R, Deshpande M S, Asgaonkar D S TNMC, Mumbai, Maharashtra

73. Factors responsible for Epilepsy treatment gap at a tertiary care hospital
Shreyas Ravat, Keyur Panchal, Neeraj Jain, Mansi Shah, Sangeeta Ravat Dr Vasantaar Pawar Medical College Nashik, Maharashtra, Seth G.S. Medical College & K.E.M. Hospital, Mumbai, Maharashtra

74. A Study of Clinical Profile, Risk Factors and Outcome of Cerebral Venous Sinus Thrombosis
Lanka Venkatesh, Krishnamurthy A, Rambabu K, Ravikumar NAVSK, Gandhi MVV, Vikramvardhan R Andhra Medical College, Visakhapatnam, Andhra Pradesh

75. Neuropsychiatric involvement of wilsons disease
Anuja Patil Dr D Y Patil Medical College and Hospital Pimpri, Pune, Maharashtra

76. A Study of Clinical Profile for Stroke Due to Dissection
V Sharath Kumar, V Sharath Kumar, J Muthukrishnan SM, Salil Gupta Armed Forces Medical College, Pune, Maharashtra

77. Non Genetic, Non Inherited, Idio-pathic Cerebellar Degeneration
Mamidala Rvchandra, Thilok Chander, Raja Rao, ISS Raju Gandhi Medical College Hyderabad, Andhra Pradesh

78. A Rare Case of Cerebrovascular Accident
Udaya Bindu Osmania Medical College and Osmania General Hospital Hyderabad, Andhra Pradesh

79. Juvenile Myoclonic Epilepsy of La-fora – A Case Report
Harish K, Rajendra, Praveen kumar Gandhi medical college Hyderabad, Andhra Pradesh
100. Toxoplasmosis Presenting as Hemiplegia
Tejal Jagdish Agarwal
Osmania Medical College and Osmania General Hospital, Hyderabad, Andhra Pradesh

101. Solos Hunt Syndrome case series
Prachi Barvala, Uma Sundar, Trupti Trivedi, Namita Padwal, N D Moulick, Mani Dubey
LTMGH, Mumbai, Maharashtra

102. Study of clinical profile of Seizure in Geriatric patients
Panchalangiappa Betageri, Anurag Chaurasia (M.D), Ravi Prakash Pandey, Sunil Ahuja
SSMC and SGMH, Rewa, Madhya Pradesh

103. Interesting case of progressive quadriaparesis
Shilpa R
Ambedkar Medical College Bangalore, Karnataka

Sindhu Ramesh, Madhura T L, Sumanth B V
A dichunchangiri Institute of Medical Sciences Bangalore, Karnataka

105. Juvenile Myasthenia Crisis
Roushan Kumar
Dr. D. Y. Patil Medical College Pimpri, Pune, Maharashtra

106. Study on type of stroke with special preference to association of modifiable risk factors
Shrutin Sonal, P. K. Agrawal, Atul Kumar, Taskeen A. Reza, Karan Bhargav, Saad Bin Safi, Md. Habibur Rahman
Kathir Medical College, Kathir, Bihar

107. A Rare Case of Intracranial Bleed Raghuvir Bahadur, Vidya P Menon, Sabarish B Nair, Janak Giridhar
Amrita Institute of Medical Sciences Ernakulam, Kerala

108. The Black Pearl of The Ocean - Kennedy Disease
Preet Shah, Pradip Parikh, Melvin Gonsalves, Kaushik Sridhara
Kasturba Medical College Manipal, Karnataka

109. A Rare case of Fulminant Toxoplasmosis Gondii encephalitis in a newly diagnosed human immunodeficiency virus (HIV)
Akash Gupta, Sulena Singh, Ravinder Garg, Avrind
Guru Gobind Singh Medical College Faridkot, Punjab

110. A Case of Neuromyelitis Optica
Lakshmi Sindhu Chinta, C S S Sarma, K Suneetha, Gowtham Praveen
Rangaraya Medical College, Kakinada, Andhra Pradesh

111. Sturge Weber Syndrome
Deepthi Alia, S. V. Ramana Murthy, S. Srinivas
GSL Medical College Rajahmundry, Andhra Pradesh

112. Type 4 adult onset Krabbe Leuko-dystrophy presenting as Anton-Babinski syndrome - A rare case report
Annu Rajpurohit, Prakash Keswani, Puneet Shah, Sourabhs Goswami
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113. An unusual case of Quadriplegia-Thyrotoxic Periodic Paralysis
Niladri Konar, Anil Malhotra
M R Bangur Hospital Kolkata, West Bengal

114. An A Case of Neuromyelitis Optica
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115. A Cross Sectional Study of Risk Factors of Stroke in Women in M. S. Ramaiyah Hospital Bangalore
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116. An unusual case of Quadriplegia-Thyrotoxic Periodic Paralysis
Niladri Konar, Anil Malhotra
M R Bangur Hospital Kolkata, West Bengal

117. Schwartz Jampel Syndrome
Lavanya S R, Mahesh Dave, Renu Khamarsa, Lavanya S R, Tapendra Nath Tiwari, Vaibhav Choudhary
RNT Medical College, Udaipur, Rajasthan

118. Webino Syndrome
Lavanya S R, Mahesh Dave, Manoj Patidar, Tapendra Nath Tiwari, Vaibhav Choudhary
RNT Medical College, Udaipur, Rajasthan

119. Distal Weakness
Shiji E Job
Govt. T D Medical College, Alappuzha, Kerala

120. Efavirenz induced neurobehavioural dysfunction-clinical profile in 50 patients - Prevalence and subtypes of cognitive dysfunction in an OPD cohort of HIV positive patients on ART
Priyank Dumade, Uma Sundar, N. D. Moulick, Nayan Brahme
Lokmanya Tilak Medical College, Mumbai, Maharashtra

121. Neurobrucellosis
Ravi Kumar Dadi, Karthik, KKD Malleswara Rao
NRI Medical College, Guntur, Andhra Pradesh

122. A study of clinical profile of Cerebral Venous Sinus Thrombosis at a tertiary care centre
Naga Satish Kumar Kota, Anadure R K, Wilson P V
INHS ASVINI Mumbai, Maharashtra

123. Tuberculosis Vs Bacillary Brain Abscess, A Diagnostic Dilemma
Prasanna Kumar Sannapu, A S Sastry, AK Sahoo, PC Mishra, SC Mohapatra
Maharajahs Institute of Medical Sciences Vijaywada, Andhra Pradesh

124. Acute stroke assessment by clinical scoring systems and correlation with plain computed tomography images
Ravi Kumar Dadi, KKD Malleswarao Rao, Naga Karthik
NRI Medical College, Guntur, Andhra Pradesh

125. Clinical study of new onset seizures in adults with reference to imaging studies
Tejaswini Muluguru
Kasturba Medical College Manipal, Karnataka

126. Idiopathic Intracranial Hypertension - A Rarely Considered Cause of Headache
Poonima P, Suresh S R
JJM Medical College Davanagere, Karnataka

127. A Rare Case of Cavernous Sinus Aspergilloma
Mohammed Mardanali Nawaz, Suresh BV
A J Institute of Medical Sciences Mangalore, Karnataka

128. Guillain-Barré syndrome and hepatitis-E: a rare association
Kunal Chandwar, Kanhai lalani, P N Palat, Janak khambolja
VS General Hospital, Ahmedabad, Gujarat

129. Unusual MRI Finding in a Case of Tetanus with Hypoxic Encephalopathy
Ramesh Rathod, Y Shilimkar, P Darole, C Limaye, U Sundar
LTMMC and LTMGH Mumbai, Maharashtra

130. An Interesting Case of Pseudotumor Cerebri
Harish H N, Karthik Saslu
JJM Medical College Davanagere, Karnataka

131. The burden of Vascular insult in brain in Alzheimer's disease (AD) in the Indian population
Abhilasha Manwatkar, Uma Sundar, Bhushan Kantale, Ravi Lokmanya Tilak Municipal Medial Collage Mumbai, Maharashtra

132. Rheumatoid meningitis
Vinatha MC, Y Bhanu Prakash, Vijayan K
KMCH Coimbatore, Tamil Nadu
133. An Observational Study of Vitamin B12 Levels and Peripheral Neuropathy Profile in Patients of Diabetes Mellitus on Metformin Therapy
Kamesh gupta1, Anand Jain, Anurag Rohatgi,2 Hindu Rao Hospital South Delhi, Delhi, 1Ram Manohar Lohia Hospital

134. To study ABI and its relation with NIHSS for prediction of severity in acute stroke patients
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GMC, Kota, Rajasthan

135. Longitudinal Extensive Transverse Myelitis Due To Tuberculosis : A Case Report
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136. Isolated Deep Cerebral Venous Thrombosis : A Case Report
Manish Dubey, BM Vishwanath
JJMMC Davanagere, Karnataka

137. Interesting Case of Eosinophilic Meningitis
Allen Dsilva, George Eappen, Aneesh Basheer, Kiran CM, Pondicherry Institute of Medical Sciences Puducherry (Pondicherry), Union Territories

138. A Study on the Clinical Profile of Stroke in Relation to Glycemic Status of Patients
Durbadal Mohanta, Girish Verma, C P Meena, Abdul Wahid, A R Pathan, Subhash Meena, Manish Varshney Government Medical College, Kota, Rajasthan

139. A Rare Case Report of Orbital Apex Syndrome with Multiple Cranial Nerve Palsies in an Uncontrolled Diabetic Immunocompromised Patient Secondary to Dental Infection
Chaitanya Varma Kamela, Swarnalatha Devi, Dasarathi G, Pavan Kumar P, Venkatesh K, Shyam Prasad Ch Asram Medical College Eluru, Andhra Pradesh

140. Hirayama Disease One of the Rare Neurological Entities

141. A Case of Hirayama Disease
Shana Jacob, T. K. Rajakumari, Jithin James Government Medical College, Kottayam, Kerala

142. Limbic Encephalitis in a young female
Abhishek Agrawal, Sharad Dev, Sauabab Nigam, Anup Singh Institute of Medical Sciences BHU Varanasi, Uttar Pradesh

143. CNS Demyelinating Disorders with unusual presentations- a case series
Rakesh MP, Uma Sundar, Prachi Barvalia, ND Moulick LTMGH & LTMMC, SION

144. An unusual case of recurrent long-segment myelitis with hemorrhagic leuencephalopathy
Yogesh Shilimkar, Priyank Dumade, Pramod Darole, Charulata Limaye, Uma Sundar LTMCC, Mumbai, Maharashtra

145. Prominent basalganglia involvement in posterior reversible leucoencephalopathy
I Narayana Reddy Medagam, Suresh, Ramesh, Baskaran, Murali Indira Gandhi General Govt Hospital Guntur, Andhra Pradesh

146. Dont Miss Me
Lakshmi Navya Cheekatla, Shiny Billa, K. Venkateswarlu Katuri Medical College and Hospital Kakinada, Andhra Pradesh

147. Three cases of new onset refractory status epilepticus (NORSE) syndrome and their outcome in a north Indian Rural Hospital.
Gaurav Aggarwal, Ankush Shrama, Bimal Kumar Agrawal MMIMSR, Ambala, Haryana

148. Cerebrotendinous Xanthomatosis is it Really that Rare
Aashka Ponda, Soham Desai Shri Krishna Hospital, Karamsad, Gujarat

149. Limb girdle muscular dystrophy a case report
Amit kumar singh Dr DY Patil Medical College Pimpri Pune, Maharashtra

150. A rare case of diencephalic seizures secondary to hemorrhagic stroke
Manish Dubey, BM Vishwanath JJMMC Davanagere, Karnataka

151. Stroke and Myocardial Ischemia in a Patient of Pheochromocytoma
Manish Dubey, BM Vishwanath JJMMC Davanagere, Karnataka

152. Cerebral Stroke and Venous Thrombosis Developed During High Altitude Expedition
Manish Dubey, BM Vishwanath JJMMC Davanagere, Karnataka

153. Neurocysticercosis
Swapnil Shinde Dr D Y Patil Medical College, Pimpri Pune, Maharashtra

154. A case of encephalitis following purified chick-embryo cell rables vaccination (Rabipur) is reported because of its rare occurrence.
Ajmel P Mohammed, Jeetendra Kumar J M, Mamatha T R, ESIC, PGIMSR, Bangalore

155. A case of Duane’s retraction syndrome with seizures
Raghavendra Prasad Adda, M Srihari Babu, Deepthi Alia, DSC Bhaskar GSL Medical College Raajahmundry, Andhra Pradesh

156. A Clinical study of acute ischemic stroke in non diabetic patients in correlation with microalbuminuria as a prognostic marker.
Ajmel P Mohammed, Jeetendra Kumar JM, Satyanarayana N ESIC PGIMSR, Bangalore

157. A Case of Neuroleptic Malignant Syndrome
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158. A case of benzodiazepine poisoning presenting as posterior circulation stroke
Abhishek Gohel, Rajkamal Chaudhari Smt NHL MMC Ahmedabad, Gujarat

159. A Case of Autoimmune Limbic Encephalitis
Lalith Kolukonda, V Ramatharakanth Katuri Medical College and Hospital Guntur, Andhra Pradesh

160. Cerebral Amyloid Angiopathy
Ananta Mishra1, D Mitra1 1Armed Forces Medical College Pune, Maharashtra 2Command Hospital, Pune

161. An uncommon etiology of cerebrovascular accident-Middle ear cholesteatoma causing pseudoanursym of Internal carotid artery a case report
Kiruthika Jayaraman, Kumar Natarajan, Vishuram P, Karuppusamy N, Akila, Kumar Natarajan, Vishnuram P, Karuppusamy N, Akila Coimbatore Medical College Hospital Coimbatore, Tamil Nadu

162. Case of Guillain Barre syndrome on prolonged ventilation
Aayush Gupta, SA Kanitkar, Meenakshi Kalyan Dr DY Patil Medical College Hospital and Research Centere Pune, Maharashtra

163. Typical and Peculier MRI Features in 2 Cases of Chronic Epilepsy
Ajaykumar Karre, Uma Sundar, Charu Londhe, Pramod Darole, Nilesh LTMGH, Sion, Mumbai, Maharashtra

164. Histopathological Evaluation of Cerebral Space Occupying Lesions
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165. Study of Patients Presenting with Headache with Red Flag Signs and its Relation with Neuroimaging
Piyush Kalantri, T. N. Dubey, Manuj Sharma, Alokit Gulati
Gandhi Medical College Bhopal, Madhya Pradesh

166. Clinical and Radioimaging Study in Posterior Circulation Stroke Patients in Central India
Alokit Gulati, T. N. Dubey, P. Dhurvey, A. Sejwar, P. Kalantri
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167. Familial hypercholesterolemia isch- emic stroke and DCM
Anbarasan Sekar, K S Chenthil, Priyadarshini
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168. A Case of Rare and Hidden Meningi- tis
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Menenakshi Mission Hospital and Research Centre Thoothukudi, Tamil Nadu

169. Assessment of high sensitivity c Reactive Protein as a prognostic indicator in acute ischemic stroke
Rakesh Patil, Basawaraj Belli, Suresh Chincholi
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170. Dynamic Mechanical Allodynia due to Silent Afferents activation in Tap Sign of Tuberculoid Leprosy
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1BJ Government Medical college Pune
Nashik, Maharashtra, 2Jagtap clinic and Research Center, Pune, India, 3Byramjee Jeejeebhoy Medical College, Pune, India, 4University of Oklahoma Health Sciences Center, Oklahoma City, USA, 5Seth Gordhandas Sunderdas Medical College, Mumbai, India

171. Study of Clinical and Neuroradiological Profile on Patients of Optic Neuritis in Central India
Ankit Gupta, T N Dubey, R K Jain
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172. Neurocognitive Effect of Nootropic Drug Brahmi (Bacopa Monnieri) in Alzheimer’s Disease
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173. Presentation of Tuberous Sclerosis without Seizures in a Family
Vijay Kumar Aitipamula, Kalindi Bendalal, S Srinivas, Jyothirajyav, Vijaya Babu D, Katayani
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174. A Study to Evaluate the Role of HSCR as a Prognostic and Diagnostic Marker in Acute Ischemic Stroke
Chaarutha R, Jeetendra Kumar, Satyanarayana, Nandini Swamy
ESICMC PGIMSR, Bangalore, Karnataka

175. Rare Case of Successful Maternal and Fetal Outcome of Guillain-Barre Syndrome Complicating Pregnancy
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1JNMC Bengalum, Karnataka, 2Anandi Nursing Home

176. Atypical Unilateral Posterior Revers- ible Encephalopathy Syndrome (PRES)
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177. Isolated Bells Palsy-an unusual comp- lication of Dengue Infection
Kabir Padhan
NTPC Hospital Ramagundam, Andhra Pradesh

178. Adult Onset Leukoencephalopathy With CSF1R Gene Mutation
Bhanuprakash Yadlapati, K. Vijayan Kovai Medical Center and Hospital Coimbatore, Tamil Nadu

179. Rare Variant of Common Hereditary Neuropathy
Lakshmi Navya Cheekatla, Shiny Billa, K Venkateswarlu
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180. An Interesting Case of Ophthalmopa- reis
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181. Acute Ascending Falcic Quadripa- resis due to Colchicine Toxicity
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182. Cerebellopontine Angle Tumour
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183. Incidence Clinical Spectrum of CNS Listerial in Tertiary Care Centre
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184. A Study on Serum Lipoprotein a Levels in Acute Ischemic Stroke in Patients with Age Less than or Equal to 40 Years
Kaza Srijan, Basavaraju MM, Manu K.
Mysore Medical College and Research Institute Mysore, Karnataka

185. Prognostic Role of C-Reactive Protein in Acute Ischemic Stroke
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186. Study of Clinical and Neuroradiological Profile on Patients of Optic Neuritis
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187. Limbic Encephalitis with refractory Status Epilepticus - A Diagnostic Challenge
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188. Central Pontine Myelinolysis Associated with Diabetic Hyperglycemia
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1. A Rare Case of Neurofibromatosis Type 1
Mounika Jetti, VS Sarma
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2. Unusual Presentation of Hodgkin’s Disease: Carcinomatous Neuropathy as Paraneoplastic Syndrome
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3. A Case of Cancer Colon Presenting as Arterial Thrombosis- Left Subcla- vian Artery Thrombosis
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4. Acute Leukemia Presenting as Cerebral Sinus Vein Thrombosis
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6. Cutaneous infarcts and ANCA positive vasculitis in AITL: a rare presentation
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AFMC, Pune, Maharashtra

7. A Case of Waldenstrom's Macroglobulinemia with Renal Involvement and Lower Respiratory Tract Infection
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8. A Rare Case of Metastatic Mesothe lioma
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9. A Presentation of Fanconi Anemia without Anemia
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10. Langerhans cell histiocytosis (LCH) is a rare proliferative disorder in which pathological Langerhans cells (LCs) are present in a variety of organs. Herein we report a 25 year old male who presented with complaints of lower back ache and Joe George, Rohan Bhise
Jawaharlal Nehru Medical College Belgaum, Belgaum, Karnataka

11. Coexistence of JAK2 and BCR-ABL Mutation in Patient with Myeloproliferative Neoplasm
Meena Konduri, R Keerthi Reddy, YS Sarma, M Srihari Babu
G S I Medical College and Hospital, Hyderabad, Andhra Pradesh

12. Langerhans Cell Histiocytosis A Rare Case Report
Joel George, Rohan Bhise
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13. Azacitidine as Primary Treatment for AML M6
Ankita Menon, Rohan Bhise
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14. Case of Multiple Space Occupying Lesions in Lungs
Shlesha R Pradhan, Subhasis Maitra
Medical College and Hospital, Kolkata, West Bengal

15. Gender Differences and Study of the Clinical Profile of Carcinoma Stomach in a Tertiary Care Centre of Coastal Andhra Pradesh
Raghavendra Prasad Adda, YS Sarma, K Meena, NVS Praveen
GSL Medical College, Rajahmundry, Andhra Pradesh

16. Uncommon presentation of an uncommon malignancy
Sarada Aila, Bellamkonda Rajasekhar, Madhura
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17. Clinico-Pathological Profile of Lung Cancer in Females at Tertiary Care Cancer Centre in India
Harshai Aswar, Dharmesh, VK Sashindran, HP Singh, D Ramrakh, Rajeswar Singh, Deepak Mulajkar, Anil Abbot, Sandeep Kumar
AFMC, Pune, Maharashtra

18. A Case of Primary Cutaneous CD30 + VET Cell Lymphoma (PC-ALCL)
Raghavendra Prasad Adda, YS Sarma, Meena Konduri
GSL Medical College, Rajahmundry, Andhra Pradesh

19. Diverse Presentations of Bronchogenic Carcinoma-A Review of Image Collection
Mamidala RV Chandra, Thrilok Chander, Raja Rao, ISS Raju
Gandhi Medical College, Secunderabad, Telangana

20. Carcinoid Syndrome and Carcinoid Heart Disease in a Case of Primary Ovarian Insular Carcinoid Tumor
Ankit Ray, Jayanta Chakraborty, Sujoy Roy Chowdhury, Shbendu Ghosh, Prabuddha Mukhopadhyay, Saunben Bhat
VIMS, Hooghly, West Bengal

21. A rare case of atypical bronchial carcinoma
Sai Krishna Gurrula, YS Sarma, Aashritha
GSL Medical College, Rajahmundry, Andhra Pradesh

22. A Rare Case of Metastatic Mesothe lioma
Sindhu Chaganti, YVS Prabhakar, Phani Kumar Redy
NRI Medical College, Vijaywada, Andhra Pradesh

23. Carcinoma of Stomach Presented as Bilateral Breast Masses And Dermatoses
Murtaza Bohra, Patil Apurva A, Panchal Harsha P, Parikh Sonia K
Gujarat Cancer Research Institute, Ahmedabad, Gujarat

24. Pulmonary Embolism as the Primary Manifestation of Gastric Adenocarcinoma
Nikita Manoharan, Durga Krishnan, Sarah Premraj, D Udayashankar, D Rajasekaran
Chettinad Health and Research Institute, Chennai, Tamil Nadu

25. Low dose oral Metronomic chemotherapy in HNSCC with MRSA Infected Malignant Fungating Wound
Rahul Arora
Tata Memorial Centre Hospital, Mumbai, Maharashtra

26. Conjugated hyperbilirubinemia with dominant Sectoral Duct Block - Hepatic Decompensation in Advanced Malignancy
Rahul Arora
Tata Memorial Centre Hospital, Mumbai, Maharashtra

27. Significance of Neutrophilic Leukocytosis as a guide to Antibiotic pre -scription in Advanced Malignancy
Rahul Arora
Tata Memorial Centre Hospital, Mumbai, Maharashtra

28. Uncommon Paraneoplastic Syndrome
Aravind Duruvasai, Preetam Arthur, Sowmya, Srinivasan, Swathy Moorthy, Lakshmi
Sri Ramachandra University, Chennai, Tamil Nadu

29. A Rare Presentation of Acute Promyelocytic Leukemia
Dhananjay Yadav CH
AJ Institute of Medical Sciences, Mangalore, Karnataka

30. S.T.U.M.P.-A Wolf in Sheep's Clothing
Satarupa Deb, Rashi Maheshwari, Biaus Samanta, Arunansu Talukdar
Medical College, Kolkata, West Bengal

31. An Very Rare Interesting Association of Neurofibroma with Cystic Lung Disease
Charan Th Reddy Vegivinti, Sharath Madhyastha, Raviraj Acharya, Kanthilatha Pai
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32. Use of Ibrutinib in Refractory C.L.L.
Sahil Bambroo, Pavithran K
Amrita Institute of Medical Sciences, Kochi, Kerala

33. A Rare Case of Non Hodgkin B-Cell Lymphoma Presenting as a Hypercalcaemia
Venkata Subbarao Kankanala, Nagesh, Ramachandra Prabhu, Trithanak, Sarath Kempegowda Institute of Medical Sciences, Bangalore, Karnataka

34. Venous Thromboembolism (VTE) in Patients with Malignancy – A Single Center Study
Anuprita Daddi, Aruna Alahari Dhir, Sheela Sawant
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78. First Presentation of Primary Sjögren’s Syndrome with Uncommon Extra-Glandular Manifestations.
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79. A Case Report of Granulomatosis With Polyangitis Presenting with Proptosis
Tukaram Kumbhar, D. S. Asgaonkar, Seema Kini, Saurabh Kamat, Shubham Jain, Mrunmayee Deshpande TNMC and BYL Nair Charitable Hospital Mumbai, Maharashtra

80. Assessment of Atherosclerosis by Carotid Intima-Medial Thickness in Patients with Rheumatoid Arthritis
Anshuman Tiwari, S Nelson, Sonjoy Pande, D Warkade NSCB MCH Jabalpur, Madhya Pradesh

81. A Case Report of Catastrophic Antiphospholipid Antibody Syndrome
Mrunmayee Deshpande, D. S. Asgaonkar, R DeSouza, Seema Kini, Saurabh Kamat, Tukaram Kumbhar, A J Gotur, Shubham Jain TNMC and BYL Nair Charitable Hospital, Mumbai, Maharashtra

82. A Rare Presentation of Primary Sjogren’s Syndrome as Hypo-kaemic Periodic Paralysis
Ankit Chellani, Shivajirao Holkar, Manuj Kumar Sarkar, Parth Pandya, Mithun Sreekumar, Rishu Mishra Index Medical Collage Hospital and Research Center Indore, Gujarat

83. Atypical Presentation of Behcets Disease
Vinod Saini, Abhishek Gupta, SK Virmani, Mayank Arora Subharti Medical College, Meerut, Uttar Pradesh

84. Clinical and Demographic Characteristics of Various Subtypes of Juvenile Idiopathic Arthritis (JIA) in North Indian Population
Sharan Dev, Late N K Singh, Anup Singh IMS BHU Varanasi, Uttar Pradesh

85. Kikuchi-Fujimoto Disease - Mimicker of Tuberculous Cervical Lymphadenitis
Bharat, Raman Sharma, Swati Srivastav, Sunil Mahan, Tara Chand, Randall Sequira SMS Medical College Jaipur, Rajasthan

86. A Case Report of Kikuchi Fujimoto Disease
Abdul Samad, KBR Shastry, Sunil Kumar, Anuradha, Suresh Kumar Gandhi Medical College Hyderabad, Andhra Pradesh

87. Adult onset still disease-Diagnosis and treatment
Gurulingesh Metipatil, V A Arun Armed Forces Medical College Pune, Maharashtra

88. A Case of Granulomatosis with Polyangitis Presenting as Peripheral Vascular Disease
Abhishek Gohel, Rajkamal Chaudhari Smt NHL MMC Ahmedabad, Gujarat

89. It is not Always Tuberculosis
Vandana Sivadas, Vidya P. Menon, Sirisha Mahankali, Sabarish B Nair, Merlin Moni, Dipu T S Amrita Institute of Medical Science Kochi, Kerala

90. A Rare Case of Systemic Lupus Erythematosus (SLE) with Posterior Reversible Encephalopathy Syndrome (PRES)
Moganti Rajesh, K.K.D. Malleswara Rao, V. N. Karthik NRI Academy of Medical Sciences Guntur, Andhra Pradesh

91. A Case of Anti Synthetase Syndrome
Anand Kumar C, S Karthik, Amar Atal Armed Forces Medical College Pune, Maharashtra

92. Autoimmune Hemolytic Anemia evolving into Systemic Lupus Erythematosus
Kush Mehotra, Kush Mehotra, Atul Gogia, Atul Kakar, S P Byotra Sir Gangaram hospital New Delhi

93. Clinical Spectrum of Systemic Lupus Erythematosus a Single Centre Prospective Study from North East India
Samir Joshi1, Bhupen Barman2 1 Neighrihms Shillong, Meghalaya, 2 General Medicine, Neighrihms

94. A Case of PUO
Mallan Prakash, Mallan Pralash, Saravanan Psgimrs Salem, Tamil Nadu

95. An Interesting Case of IgG4 Related Disease
Makam Sahiya, P Rajasekhar, D Srinivasulu, G Vamsi Vihari Kurnool Medical College Kurnool, Andhra Pradesh

96. Relationship between Takayasu Arteritis and Anti Phospholipid Syndrome- A Rare Case Presentation
Keshavachandra Thejaswi, Bhaktavatchalam Dr. B. R. Ambedkar Medical College, Bangalore, Karnataka

97. Adverse Drug Reaction in Rheumatoid Arthritis Patients on Combination DMARDs
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98. Rare presentation of Gout as a single Gouty Tophaceous nodule near elbow without involving any joint prodeep rongali, Swarna Latha Devi G, Hanumanth Rao M, Ramya N, Narendra M Asram Medical College Eluru, Andhra Pradesh

99. A Case of IGA Vasculitis
Kumar Nirbhay, Beenal Dhooria, M. V. Aditya Kumar, Vikash Kumar Armed Forces Medical College Pune, Maharashtra
100. A Case of Juvenile Idiopathic Arthritis
Sinu RV, Glaxon Alex, Wilson Joseph, C. Jayakumar
Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum

101. Study on Carotid Intimal Thickness in Rheumatoid Arthritis Patients as Marker of Atherosclerosis
Ramakanth Dondapati, Dilip M Rampure, B. Rama Krishna
Mamata Medical College Vijaywada, Andhra Pradesh

102. Common Variable Immunodeficiency
Hari Prasad, Bhargavan Pallivalippal
Baby Memorial Hospital, Kerala

103. Acute Pancreatitis in SLE - Severity and Prognosis
Thejaswini Muluguru, Mukhyaprana Prabhu, Sabarinatha, Pavan Reddy Thondepu
Kasturba Medical College Manipal, Karnataka

104. Autoimmune autonomic ganglionopathy in SLE
Catherine Paul, Vijayshree M S Ramaiah medical college Bangalore, Karnataka

105. A case of Wegener’s granulomatosis
Sakir Hussain
Govt Medical College Kottayam, Kerala

106. Mononeuritis Multiplex – An Initial Presentation in SLE
Nishaanth Kannan, N.N. Anand, Karthik Ramalingam
Sree Balaji Medical College and Hospital Chromepet Chennai, Tamil Nadu

107. Scleroderma
Devanshi Sharma
Dr DY Patil Medical college pimpri Pune, Maharashtra

Tropical Diseases

1. A case of Hepatitis E presenting in Hepatic coma
Murar Yelekar, Harshwardhan Dongre, M. E. Yelekar, Manjunath M
K J Somaiya Medical College Hospital Mumbai, Maharashtra

2. Delayed Autoimmune Haemolytic Anaemia in Malaria Following Artemunate
Subrata Bhowmik, A Debbarma Agartala Government Medical College Agartala, Tripura

3. Atypical Presentation of Hydatid Disease as Prolonged Fever
Rohith P S, PK Rajakumari, NN Padmakumar, Lijo K Mathew, Sue Ann Zachariah
Government Medical College Kottayam, Kerala

4. A Rare Case Report of Isolated Hepatic Tuberculosis Presenting as Fever of Unknown Origin and Jaundice
Meghnad Meher, Rina mohanty, Ramachandra sethy, Aujijwolya Kumar Jena, PhilemonEkka, Satarupa Mohapatra
SCBMCH CTC Cuttack, Orissa

5. A study to determine the etiology and seasonal trends of acute febrile illness in Assam
Shiny Baruah, N. Goswami
Gauhati Medical College and Hospital Guwahati, Assam

6. Thrombocytopenia in malaria
Mohammed Asif hussain
Dr B.R. Ambedkar Medical College and Hospital Bangalore, Karnataka

7. Atypical Manifestations of Dengue Fever
Goutham Akidi, Raja Rao, Issv Raju, Thrilok Chander, Roshendrakumar
Gandhi Medical College Hyderabad, Andhra Pradesh

8. Pumonary Hypertension as a Complication of Filariasis
Prakash Relwani, Manjunath M
Gandhi Medical College, and Research Chandigarh, Union Territories

9. Eschar in Scrub Typhus- A Study from North Eastern India
MD Jamil, P K Bhattacharya, Akash Roy, K K Talukdar, Subrahmanyam Murti V, MD Jamil Neigrihms Shillong, Meghalaya

10. Study on Clinical Presentation & Outcome of Malaria from an Underreported, P. vivax Predominant Region of North India
Nagendra Pratap Verma, Verma RK, Giri R, Verma S
GSVM Medical College Kanpur, Uttar Pradesh

11. Dengue Shock Syndrome
Mohammed Asif Hussain
Dr B.R. Ambedkar Medical College and Hospital Bangalore, Karnataka

12. A case of melioidosis presenting as CVA
Anupama Swarna, Raja Rao, Shyam sunder, Thrilok chander
Gandhi Medical College, Andhra Pradesh

13. Visceral Scalloping on Abdominal Computed Tomography due to Abdominal Tuberculosis
Vishal Sharma, Anmol Bhatia, Sarthak Malik, Navjeet Singh, Surinder S Rana
Postgraduate Institute of Medical Education and Research Chandigarh, Union Territories

Akshay Shewale, J. Dadvad, M. Mahashabde, G. Chaudhari
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15. Antitubercular therapy for patients with abdominal cocoon- Can surgery be avoided
Vishal Sharma, Harshal S Mandavdhare, Surinder S Rana, Harjeet Singh, Rajesh Gupta
Postgraduate Institute of Medical Education and Research Chandigarh, Union Territories

16. Disseminated cysticercosis presenting as pseudohypertrophy of biceps
SAURABH MARWAHA, Ankush Sharama, B.K Agrawal
Maharishi Markandeshwar Institute of Medical Science and Research Amritsar, Punjab

17. Filariasis: An Unusual Presentation As Pancytopenia
Uday Kiran Mangipudi, Vasudeva Acharya, Shastry B A
Kasturba Medical College Manipal, Karnataka

18. Tropical Pyomyositis-An Uncommon Disease with Atypical Presentation in Imnunocompetent Host
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MGM Medical College Indore, Madhya Pradesh

19. Renal and Hepatic Derangements in Malaria with Clinical Outcome
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JJM Medical College Davanagere, Karnataka

Miscellaneous

1. Severe oral apthous ulcers due to Etodolac, Aceclofenac and Ayurvedic drug-drug interactions
Sankeet Sheth1, Bhalendu S. Vaishnav1, Kalalpi Patel2
1Pramukh Swami Medical College, Karamsad, Gujarat, 2J.S. Ayurveda Mahavidyalaya, Nadiad, Gujarat

2. A Rare Cause For Persistent Vomiting
Sunil Mohan, Sue Ann Zachariah, P P Mohanan
Government Medical College Kottayam, Kerala

3. Clinical and Biochemical Characteristics of Exertional Heat Stroke Among Paratroopers in Agra, India
Rajesh Deshwal
Base Hospital, Delhi Cantt

4. Mortality Trends in a Tertiary Care Hospital in Mysuru, Karnataka
Deepak Chappidi, Suresh Babu, Ravi V Krishna Kishore
JSS Medical College Mysore, Karnataka

5. The Clinical Spectrum of Hyponatremia in Critical III Patients
Biswajit Mishra, Sheela Chakravarty
Fortis Hospital Bangalore, Karnataka
6. Gentamicin induced DRESS Syndrome
Ajit Singh, H K Aggarwal, Tarana Gupta, Sudhir Mor, Pulkit Chhabra
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7. Varied presentations of hyperesinophilic A case series
Sudhir Mor, H K Aggarwal, Tarana Gupta
Pt B D Sharma PGIMS Rohtak, Haryana

8. A Case Report of Dapsone Hypersensitivity Syndrome Presenting as Acute Hepatitis
P Dileep Kumar, Pradeep T.V., Dhananjaya PE
JMJ Medical College Davanagere, Karnataka

9. Drug reaction with Eosinophilia and Systemic Symptoms Syndrome in a Patient Taking Anti-TB Drugs
Abdul Mateen, Ashok M L
Bangalore Medical College and Research Institute

10. Conservative Management of a Large Spontaneous Sub-Capsular Hematoma of Spleen in Severe Haemophilia-A
Abdul Mateen, Meera V
Bangalore Medical College and Research Institute

11. Baclofen Can Cause Trouble
Sinu RV, Divya S Nair, Manoj P, Abilash Kannan, S Bhasi
Sree Gokulam Medical College and Research Foundation, Trivandrum

12. Medical Disorders Complicating Pregnancy- Three Case Reports
K Abhishek, G Usha, G Rajender
Durgabai Deshmukh Hospitals, Andhra Pradesh

13. Clinical Profile of Hypoekpericemal Pericardial Paralysis
Prasanna Kumar Sannapu, A S Sastry, A K Sahoo, P C Mishra, S C Mohapatra
Maharajahs Institute of Medical Sciences Vijaywada, Andhra Pradesh

14. Varied Presentations of Systemic Lupus Erythematosus
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Rangaraya Medical College Kakinada, Andhra Pradesh

15. Pulmonary Artery Hypertension in a Patient with Hereditary Haemorrhagic Telangiectasia
P Dileep Kumar, Dhananjaya PE
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16. To Study the Prevalence and Clinical Significance of Thyroid Incidentalomas Detected on 18F-Fluorodeoxyglucose Positron Emission Tomography Scan (FDG PET)
Gaurav Datta, AVS Anil Kumar
AFMC Pune, Maharashtra

17. Case of Neurofibromatosis with Congenital Heart Disease
Phunthso Choden, Rajath Govind
Armed Forces Medical College Pune, Maharashtra

18. A Rare Case report of Xeroderma pigmentosum with medical association
Amit Chaudhari, Sangeeta J Pednekar, Dharmendra Pandey, Utkarsh Deshmukh, Neerja Pandey
LTMMMC & LTMGH Mumbai, Maharashtra

19. Sitagliptin Associated Pancreatitis
Archit Dahiya, Farvati Nandy
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20. Levetiracetam Induced Hypoglycemia
Ashwin Kumar Panda, Rajeev Chawla, Hitesh Panyani
Maharaja Agrasen Hospital West Delhi, Delhi

21. Evaluation of Serum Lipid Profile in Chronic Kidney Disease Patients in an Industrial Hospital
Ankit Data, S. L. Srivastava, Vinay Kumar, Ankit Data
Tata Motors Hospital Jamshedpur, Jharkhand

22. Role of Urine Dipstick in Diagnosing Meningitis, Where there is no Laboratory
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23. A Rare Presentation of SLE with Wilsons Disease
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Sikkim Manipal Institute of Medical Sciences Gangtok, Sikkim

24. A Case of Primary Amyloidosis
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1) Armed Forces Medical College Pune, Maharashtra, 2) MH Meerut

25. A Rare Lump in the Thigh
Sappa Naresh, Harish, J.Y. Visweswara Reddy, Uma, Lakshmi Visruja
Pesimr Kuppam Chittoor, Andhra Pradesh

26. A Rare Case of MOHR Claussen Syndrome in a Young Female
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S.M Imroz, Indira Priyadarshini, B. Balasubramanyam
SVMC Tirupati, Andhra Pradesh

27. Comparison of Bone Mineral Density in Patients of Non Metastatic Breast Cancer Pre and Post Chemotherapy
Lakshmi PK, TVSGVK Tilak Command Hospital Bangalore, Karnataka

28. Comparison of Bone Mineral Density in Patients of Non Metastatic Breast Cancer Pre and Post Chemotherapy
Lakshmi PK, TVSGVK Tilak Command Hospital Bangalore, Karnataka

29. Antibiogram and Bacteriological Profile in Patients Diagnosed with Sepsis Admitted in Intensive Care Unit
Amrut Dhulappanavar, M L Ali, S L Srivastava, Vinay Kumar, Ankit Data, Daya V Swani
Tata Motors Hospital Jamshedpur, Jharkhand

30. Effect of Nutritional Anemia on HBA1C Levels in Non Diabetics
Prasanna Kumar Sannapu, AS Sastry, AK Sahoo, PC Mishra, SC Mohapatra
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31. An Unusual Case of Hypoxia
Raghavendra B
AJIMS Mangalore, Karnataka

32. An Interesting Case of Hemoptysis
Padmini S N, V Channaraya
Kemppegowda Institute of Medical Sciences Bangalore, Karnataka

33. An Unusual Presentation of Potts Spine
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34. An Interesting Case of Jaundice
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35. An Unusual Case of Gout Presenting as a Single Gouty Tophaceous Nodule Near Elbow without Arthritis
Asram Medical College Eluru, Andhra Pradesh

36. Association Between Overweight, Obesity in Relation to Serum HS-CRP Levels in Adults
Prakash Appasan, Lavanya K, Raviraja V Acharya, Weena Stanley, Charan Thej Reddy
Venkatesh K, Kasturba Medical College Manipal, Karnataka

37. Aplasia of Right Lung- A Rare Case
Abhishek Kumar, Sitendra Kumar Patel, Niraj Bohania, Niharka Sinha
1) Mahavir Arogya Sansthan Patna Patna, Bihar, 2) Max Super Speciality Hospital, Saket, New Delhi, 3) LHMC, New Delhi, 4) AIIMS Patna

38. Isotretinoin - A Rare Cause of Gross Facial Hirsutism
Somprat Singh, Sagar Dagdiya, Rohit Mehtani, Vinod Verma, Anil Bhari
MGM Medical College, Indore, Madhya Pradesh
Kamal Kishore Pandita¹, Sushil Razdan¹, Ekta Rai¹, Sawarkar Sharma², Ankit Mahajan³, Parvinder Kumar¹, Arshia Angural³, Manoj K. Dhar³, Kumarasamy Thangaraj⁴, Carol Wise⁵, Shiroikegawa⁶  
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40. Habits of skipping meals among medical students: A cross-sectional study
Sisir Chakraborty¹, Rajdip Hazra¹, Kaushik Ghosh¹, Susmita Ghosh¹, Saktipada Mandi¹, Ambarish Mukherjee¹  
¹College of Med and SDH Kolkata, West Bengal, ²NRS Medical College, Kolkata W.B, ³Mursidabad Medical College, W.B, ⁴College of Med and SDH kolkata, ⁵Charnok Hospital, Kolkata

41. A physical & Psychiatric Evaluation Among Young Female With suicidal attempts with special reference to Stress, Thyroid Profile & PCOS, in medicine ward
Ajit Kumar Jain, Hariom Gupta, Shailendra kumar Manjhvar, Nimisha Mishra, Sanjeev Shsrma, Manoj Indurkar S.S. Medical College & Sanjay Gandhi Memorial Hospital, Rewa (M.P)

42. Warfarin Induced Skin Necrosis
Anusha Medi¹, VS Kanni, Leela Krishna Kamineni Institute of Medical Sciences Adilabad, Andhra Pradesh

43. Dress Syndrome
Swapnil Shinde Dr DY Patil Medical College, Pimpri, Pune, Maharashtra

44. Straight Back Syndrome
Sinu RV, Glaxon Alex, Sumesh Raj, Priyadarsini, Jesmi chacko Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum

45. Phenobarbitone as a Cause of Dupytrens Contracture
Chethan G D, Thippeswamy AP JJMMC Davanagere, Karnataka

46. Correlation between vascular age and markers of adiposity
Gaurang Patel, Bhalendu Vaishnav Pramukh Swami Medical College Surat, Gujarat

47. A Rare Association of Marfans Syndrome and Kartagener Syndrome
Arunsingh Tejavath, T. Murali Venkateswararao, B. Bhashkarao, Tejaswi Jallepalli NRI Medical College and General Hospital Guntur, Andhra Pradesh

48. Purple hand
Avinash Manim, Ashim Saha, Indranil Thakur Medical College Kolkata, West Bengal

49. Nanomedicine-Whats Hot
Vivek Chandra NUK Gorakhpur, Uttar Pradesh

Physicians Research Foundation
National Research and Publication Workshop

The Physicians Research Foundation and API West Bengal Branch successfully organized 2nd National Research and Publication Workshop, at Novotel Hotel, New Town, Kolkata, West Bengal on 10th-11th December 2016. The API-West Bengal Branch made wonderful arrangement for smooth functioning of the workshop. The scientific program was a highly appreciated by all delegates and API members. Sixty-three delegates were registered for the workshop and everyone actively participated from start to end. They were briefed on Basics of clinical research as well as taught the pearls of successful paper writing and publication. The JAPI Editor in Chief Dr. Milind Y Nadkar also delivered update of JAPI-online issues and publication.

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