ORIGINAL ARTICLE

Role of Expanded A-DROP Score in Predicting 14-day Mortality in Patients with Community-acquired Pneumonia: A Prospective Observational Study from a Tertiary Care Center in North India

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Abstract

Background: Community-acquired pneumonia (CAP) carries substantial mortality. Common scoring tools such as CURB-65, A-DROP, and PSI have limitations. The expanded A-DROP incorporates clinical and biochemical markers, showing promise and requires validation in Indian settings.

Materials and methods: This prospective observational study at a North Indian tertiary center (March 2024–June 2025) included 80 adults with CAP. Expanded A-DROP scores were calculated within 24 hours of admission, and patients were followed for ICU admission, in-hospital, and 14-day postdischarge mortality. Analyses used ANOVA, Chi-square, logistic regression, and receiver operating characteristic (ROC) curves ($p < 0.05$).

Results: Of 80 patients, 22 (27.5%) died within 14 days. Mortality was 1/23 (4.3%) in group I (0–2), 2/22 (9.1%) in group II (3–4), and 19/35 (54.3%) in group III (≥5) ($p < 0.001$). ICU admission rose with severity: 1/23 (4.3%), 8/22 (36.4%), and 25/35 (71.4%) ($p < 0.001$). Mean (SD) hospital stay increased: 4.0 (0.9), 7.0 (1.1), and 9.0 (1.3) days ($p < 0.0001$), with positive correlation to score ($\rho = 0.53$, $p < 0.000001$). ROC analysis gave an AUC of 0.871 (95% CI: 0.783–0.958). A score ≥5 predicted mortality with 86.2% sensitivity and 72.4% specificity. Multivariate regression identified Expanded A-DROP as the only independent predictor (OR 3.07, $p < 0.001$).

Conclusion: Expanded A-DROP demonstrated strong predictive power for short-term mortality, ICU requirement, and hospital stay in CAP. It is a simple, clinically relevant, and effective tool for early triage, especially in resource-limited settings.

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Introduction

Community-acquired pneumonia (CAP) remains a leading cause of morbidity and mortality globally, especially among the elderly and those with comorbidities.[1] Despite advances in antimicrobial therapy and supportive care, CAP continues to impose a significant burden on healthcare systems—particularly in low- and middle-income countries such as India, where the first 2 weeks of hospitalization are critical due to heightened mortality risk.[2,3]

In India, factors such as high population density, air pollution, undernutrition, limited rural healthcare access, and a high prevalence of diabetes, COPD, and tuberculosis amplify the burden of CAP.[4] Lower respiratory tract infections rank among the top causes of infectious disease-related deaths and disability-adjusted life years (DALYs) lost in the country.[5] Seasonal variation, low adult vaccination coverage, and antibiotic misuse further complicate disease control and management.[6,7] Many hospitalized patients progress to respiratory failure or sepsis, contributing to high early mortality rates.[8]

Several clinical prediction tools are used to assess CAP severity and guide triage decisions, such as the pneumonia severity index (PSI), CURB-65, and the A-DROP score, developed by the Japanese Respiratory Society for Asian populations.[9–15] The Expanded A-DROP score is a modified version of A-DROP that incorporates additional risk factors: malignancy, heart rate ≥100/min, serum albumin ≤3.09 gm/dL, serum lactate >1.7 mmol/L, and NT-proBNP >500 pg/mL,[12] in addition to the original five parameters (age, dehydration, respiratory status, orientation, and blood pressure). Each component scores 1 point, yielding a total of 0–10. Based on the cumulative score, patients are stratified into three categories:

- Score 0–2: Low risk
- Score 3–4: Intermediate risk
- Score ≥5: High risk

Initial retrospective studies by Ahn et al. in 2018 demonstrated that the Expanded A-DROP score had better predictive accuracy for mortality in CAP than conventional tools. In a large-scale study involving 1,574 hospitalized CAP patients, Ahn JH et al. reported significantly higher AUC values for the Expanded A-DROP score (0.835) compared to CURB-65 (0.779) and PSI (0.790), supporting its superior discriminative ability.[12] Studies that had come before and after this also supported the inclusion of biomarkers such as NT-proBNP, lactate, and albumin in CAP prognostication.[16–19] However, limitations of these studies include regional and demographic homogeneity, retrospective design in earlier studies, and a lack of focus on short-term (14-day) mortality relevant for early triage decisions.

Given the high early mortality associated with CAP and the evolving need for more robust and locally applicable prognostic tools, this study seeks to evaluate the utility of the Expanded A-DROP score in predicting 14-day mortality among hospitalized patients with community-acquired pneumonia. By doing so, it aims to contribute to improved clinical decision-making and patient outcomes in routine medical practice.

Materials and Methods

Study Design and Setting

A prospective observational study was conducted in the Department of Internal Medicine at a tertiary care center in North India. The study spanned 16 months, from

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March 1, 2024, to June 30, 2025, with the last patient enrolled on June 15, 2025.

Ethical Clearance

Approval was obtained from the Institutional Ethics Committee on February 5, 2024. Written informed consent was taken from all participants or their legal guardians.

Eligibility Criteria

Patients aged 18 years or older, admitted with clinical and radiological evidence of community-acquired pneumonia (CAP), were included. CAP was defined by the presence of symptoms such as cough, fever, dyspnea, or pleuritic chest pain along with new pulmonary infiltrates on imaging, acquired outside the hospital or within 48 hours of admission.

Exclusion criteria included hospital-acquired or ventilator-associated pneumonia, active pulmonary tuberculosis or fungal infections, or refusal to consent.

Data Collection

Demographic details, presenting complaints, comorbidities, and vital parameters were recorded at admission. Laboratory investigations included complete blood count, renal and liver function tests, electrolytes, arterial blood gas, serum lactate, albumin, and NT-proBNP levels. Radiographic findings were documented based on the chest X-ray.

Scoring Systems

The Expanded A-DROP score was calculated for each patient using 10 parameters: age (≥70 years for males, ≥75 years for females), blood urea nitrogen (BUN) ≥21 mg/dL, SpO_2 ≤90% or PaO_2 ≤60 mm Hg, confusion, systolic BP ≤90 mm Hg, heart rate ≥100/min, serum albumin ≤3.09 gm/dL, lactate >1.7 mmol/L, NT-proBNP >500 pg/mL, and presence of malignancy. One point was given per criterion (maximum score: 10). Patients were categorized into three risk groups:

- Low risk (0–2).
- Moderate risk (3–4).
- High risk (≥5).

Outcome Measure

The primary outcome was 14-day all-cause mortality. In-hospital patients were followed daily, and those discharged before day 14 were contacted telephonically to verify survival status. Secondary outcomes were duration of hospital stay, need for ICU admission, and in-hospital mortality.

Statistical Analysis

Analysis was performed using IBM SPSS v28.0. Categorical variables were presented as frequencies and percentages. Intergroup comparisons were made using Chi-square or Fisher's exact test. Group comparisons among A-DROP categories for the primary and secondary outcomes were analyzed using one-way ANOVA. Univariate regression was performed to find individual significant contributors to 14-day mortality, and multivariate regression analysis was done to remove all confounding factors.

Receiver operating characteristic (ROC) curves were plotted to assess the predictive accuracy of Expanded A-DROP scores for 14-day mortality. A p-value < 0.05 was considered statistically significant.

Results

Demographics

A total of 80 patients with community-acquired pneumonia (CAP), as defined by clinical criteria, were enrolled after obtaining informed written consent. The mean age of the study population was 62.1 (11.9) years, with a median age of 63.5 years (range: 33–85 years). The maximum number of participants (36.3%) was within the age group of 56–65 years (Table 1). Of the 80 participants, 41 (51.3%) were female, and 39 (48.8%) were male.

Clinical Characteristics

The most common presenting complaint was shortness of breath in 53 patients (66.2%), followed by cough with or without expectoration in 51 (63.7%) and fever in

Table 1: Baseline sociodemographic and clinical characteristics of the study population

Characteristic	*Mean (SD)/median (IQR)*
Age (years)	62.08 (11.9)/63.5 (15)
Age group	Number of participants (%)
35–45 years	11 (13.75%)
46–55 years	10 (12.5%)
56–65 years	29 (36.25%)
66–75 years	18 (22.5%)
76–85 years	12 (15%)
Gender	
Male	41 (51.25%)
Comorbidities	
Smoking exposure (active/passive)	23 (28.7%)
Diabetes mellitus	30 (37.5%)
History of hospitalization/IV antibiotic use in the past 90 days	29 (36.2%)
Chronic obstructive pulmonary disease	19 (23.7%)
Immunosuppression	5 (6.2%)
Hypertension	28 (35%)
Coronary artery disease	9 (11.2%)
Chronic kidney disease	12 (15%)
Chronic liver disease	1 (1.2%)
Hypothyroidism	4 (5%)
Malignancy	6 (7.5%)
Symptoms at presentation	
Shortness of breath	53 (66.2%)
Cough	51 (63.75%)
Fever	43 (53.7%)
Chest pain	12 (15%)
Anxiety	10 (12.5%)
Altered sensorium	20 (25%)
Vital parameter	Mean (SD)
Pulse rate (bpm)	105 (17)
Systolic BP (mm Hg)	120 (32)
Diastolic BP (mm Hg)	73 (18)
Respiratory rate (breaths/min)	23 (6)
Room-air oxygen saturation (%)	86 (9)

43 (53.7%). Other symptoms included pleuritic chest pain in 12 (15.0%) and a sense of restlessness ("ghabraahaat") in 10 (12.5%). Altered sensorium was documented in 20 patients (25.0%).

On examination, tachycardia (pulse >100/min) was present in 47 patients (58.8%). The mean SpO_2 on room air was 86 (9)% (median 87, range 60–99). The mean respiratory rate was 23 (6) breaths/min (median 22, range 12–36). Hypotension (SBP < 90 mm Hg) was observed in 11 patients (13.8%).

Comorbidities and Risk Factors

Among the 80 participants, the most common comorbidities were type 2 diabetes mellitus (30, 37.5%), hypertension (28, 35.0%), and COPD (19, 23.7%), followed by chronic kidney disease (12, 15.0%) and coronary artery disease (9, 11.2%). Malignancy was present in six patients (7.5%), hypothyroidism in four (5.0%), and chronic liver disease in one (1.2%). A history of hospital admission or intravenous antibiotic use within 90 days was reported in 29 patients (36.2%). Exposure to cigarette smoke occurred in 23 patients (28.7%), including six passive smokers. Immunosuppression was noted in five patients (6.2%), including one with HIV and four on long-term immunosuppressive therapy. Two patients had prior COVID-19 infection, and one had a previous CAP episode.

Laboratory Findings

The laboratory profile reflected the heterogeneity and severity of CAP (Table 2).

Arterial blood gases indicated moderate hypoxemia, with a mean PaO_2 of 69.8 (30.5) mm Hg and a mean SaO_2 of 85.2%, the lowest being 47.9%. Serum lactate averaged 1.71 (0.84) mmol/L, reaching 4.7 mmol/L, while mean albumin was 3.27 (0.55) gm/dL, with hypoalbuminemia in 33.4% of patients. NT-proBNP levels were variable [mean 635 (384) pg/mL], exceeding 500 pg/mL in 62.5% of participants. Hematological parameters showed mean hemoglobin 11.3 (2.3) gm/dL (anemia 43.7%), total leukocyte count 12,667/mm^3 (leukocytosis 52.5%), and mean platelet count 2.58 (1.13) × 10^5/mm^3 (thrombocytopenia 16.2%). Renal dysfunction was common, with a mean urea of 58.6 (39) mg/dL, creatinine 1.51 (1.2) mg/dL, and 60% having BUN ≥21 mg/dL. Liver function tests showed only mild elevations.

Expanded A-DROP Score

The mean Expanded A-DROP score in the study population was 4.0 (2.0), with a median of 4 (range: 0–10). The interquartile range was 2–5, indicating that the majority of patients fell into the moderate-to-severe risk categories. The distribution of the study population into three different subgroups based on Expanded A-DROP scoring is given in Figure 1.

Outcomes by Expanded A-DROP Groups

Clinical outcomes demonstrated a clear worsening trend with higher Expanded A-DROP scores. Patients in the high-risk group (≥5) had significantly longer hospital stays, higher ICU admission rates, and greater in-hospital and 14-day mortality compared with those in the lower-score groups ($p < 0.001$ for all comparisons). The detailed distribution of outcomes across the three groups is presented in Table 3.

Predictors of 14-day Mortality

On univariate analysis, several clinical and laboratory parameters, including altered sensorium, tachycardia, hypotension, hypoxia, malignancy, elevated serum lactate, raised NT-proBNP, and higher Expanded A-DROP scores, were significantly associated with 14-day mortality (Tables 4 and 5).

On multivariate logistic regression, only the Expanded A-DROP score remained an independent predictor of 14-day mortality (OR 3.07, 95% CI 1.76–5.35, $p < 0.001$).

ROC Curve Analysis

The predictive performance of the Expanded A-DROP score incorporating NT-proBNP for

Table 2: Descriptive summary of laboratory parameters

Parameter	*Mean (SD)*	*Median (IQR)*	*Min–max*
Hemoglobin (gm/dL)	11.3 (2.3)	11.4 (10.1–12.6)	6.5–17.9
Total count (cells/mm^3)	12660 (7460)	11200 (8600–14200)	4400–54080
Platelet count (× 10^4 cells/mm^3)	2.58 (1.13)	2.45 (1.75–3.20)	0.40–5.70
Urea (mg/dL)	58 (39)	50 (34–74)	16–302
Creatinine (mg/dL)	1.5 (1.2)	1.1 (0.8–1.8)	0.3–8.2
BUN (mg/dL)	27 (18)	23 (16–34)	7–141
OT (IU/L)	77 (316)	35 (23–50)	7–2859
PT (IU/L)	51 (182)	18 (14–36)	3–1628
ALP (IU/L)	134 (117)	107 (74–142)	15–782
TB (mg/dL)	0.95 (0.60)	0.80 (0.50–1.26)	0.09–2.60
DB (mg/dL)	0.42 (0.40)	0.26 (0.10–0.60)	0.05–1.80
Serum lactate (mmol/L)	1.71 (0.84)	1.50 (1.10–2.10)	0.50–4.70
Serum albumin (gm/dL)	3.27 (0.55)	3.30 (2.98–3.60)	1.72–4.50
NT-proBNP (pg/mL)	635 (384)	659 (370–912)	6–1434

Cr, serum creatinine; SGOT, serum glutamic oxaloacetic transaminase; SGPT, serum glutamic pyruvic transaminase; ALP, alkaline phosphatase; TB, total bilirubin; DB, direct bilirubin; NT-proBNP, N-terminal pro–B-type natriuretic peptide

Table 3: Comparison of clinical outcomes across expanded A-DROP score groups

Outcome	*Group I (0–2) n = 23*	*Group II (3–4) n = 22*	*Group III (≥5) n = 35*	*p-value*
Hospital stay (days), mean (SD)	4.0 (2.7)	7.3 (3.6)	9.5 (4.2)	< 0.0001
ICU admission, *n* (%)	1 (4.3%)	3 (13.6%)	25 (71.4%)	< 0.0001
In-hospital mortality, *n* (%)	0 (0%)	2 (9.1%)	16 (45.7%)	< 0.001
14-day mortality, *n* (%)	1 (4.3%)	2 (9.1%)	19 (54.3%)	< 0.001

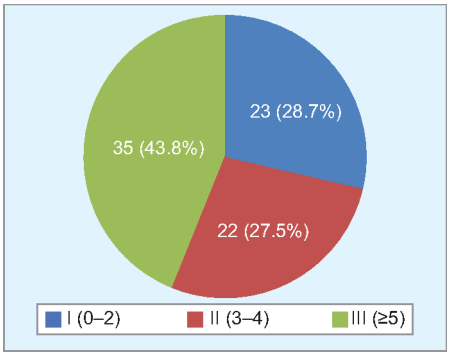

Fig. 1: Distribution of participants across Expanded A-DROP score groups

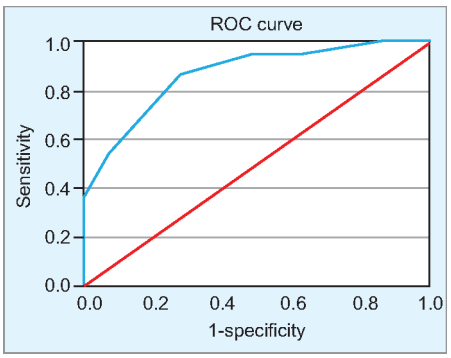

Fig. 2: ROC curve for Expanded A-DROP score

Table 4: Univariate analysis of quantitative demographic and laboratory parameters for 14-day mortality

Parameter	*Crude odds ratio [Exp(B)]*	*p-value*	*95% CI (lower limit–upper limit)*	*Significance*
Age	1.033	0.154	0.988–1.080	Not significant
Respiratory rate	1.01	0.371	0.99–1.04	Not significant
Serum lactate	2.54	0.004	1.35–4.77	Significant*
Serum albumin	1.19	0.706	0.48–2.95	Not significant
Hemoglobin	0.879	0.248	0.706–1.094	Not significant
Total count	1.0	0.92	1.000–1.000	Not significant
Platelet count	1.25	0.316	0.809–1.925	Not significant
Total bilirubin	1.006	0.989	0.444–2.277	Not significant
Direct bilirubin	1.01	0.902	0.71–1.43	Not significant
SGOT	0.999	0.656	0.995–1.003	Not significant
SGPT	0.999	0.63	0.993–1.004	Not significant
ALP	1.0	0.879	0.995–1.004	Not significant
Serum urea	1.0	0.990	0.988–1.013	Not significant
Serum creatinine	1.014	0.944	0.695–1.479	Not significant
Blood urea nitrogen	1.0	0.992	0.974–1.027	Not significant
NT-proBNP	1.003	0.000	1.002–1.005	Significant*
Expanded A-DROP score	3.066	0.000	1.758–5.347	Significant*

CI, confidence interval; SGOT, serum glutamic oxaloacetic transaminase; SGPT, serum glutamic pyruvic transaminase; ALP, alkaline phosphatase; NT-proBNP, N-terminal pro–B-type natriuretic peptide; *Significant

Table 5: Univariate analysis of qualitative demographic and laboratory parameters for 14-day mortality

Parameter	*Crude odds ratio [Exp(B)]*	*p-value*	*95% CI (lower limit–upper limit)*	*Significance*
Gender	1.071	0.890	0.401–2.860	Not significant
Fever	0.376	0.059	0.136–1.037	Not significant
Cough	0.993	0.990	0.358–2.756	Not significant
Shortness of breath	1.514	0.452	0.514–4.458	Not significant
Chest pain	2.143	0.240	0.600–7.647	Not significant
Anxiety	1.926	0.350	0.487–7.610	Not significant
History of prior hospitalization/IV antibiotic use	2.222	0.119	0.814–6.064	Not significant
Exposure to cigarette smoke	0.456	0.205	0.135–1.536	Not significant
Immunosuppression/HIV infection	0.643	0.700	0.068–6.090	Not significant
Malignancy	6.222	0.044	1.051–36.842	Significant*
T2DM	1.583	0.367	0.583–4.298	Not significant
HTN	1.852	0.230	0.677–5.068	Not significant
COPD	0.637	0.473	0.186–2.185	Not significant
CKD	0.203	0.139	0.025–1.680	Not significant
CLD	2.0	0.362	0.45–8.79	Not significant
CAD	0.729	0.708	0.139–3.810	Not significant
Hypothyroidism	0.873	0.909	0.086–8.869	Not significant
Altered sensorium	10.524	0.000	3.298–33.582	Significant*
Tachycardia	4.500	0.014	1.356–14.932	Significant*
Hypotension	6.000	0.003	1.810–19.891	Significant*
Hypoxia	8.125	0.008	1.737–38.011	Significant*

CI, confidence interval; T2DM, type 2 diabetes mellitus; HTN, hypertension; COPD, chronic obstructive pulmonary disease; CAD, coronary artery disease; CKD, chronic kidney disease; CLD, chronic liver disease; *Significant

14-day mortality in CAP was assessed using ROC analysis (Fig. 2). The area under the curve (AUC) was 0.871 (95% CI: 0.783–0.958; $p < 0.001$), indicating excellent discriminatory power.

A cut-off score of ≥5 provided the best balance between sensitivity and specificity, yielding 86.2% sensitivity and 72.4% specificity. This threshold effectively identified patients at risk of 14-day mortality while minimizing false positives.

Discussion

This study evaluated the Expanded A-DROP score for predicting 14-day mortality in CAP and demonstrated its strong discriminatory ability across a wide range of clinical outcomes.

Demographics and Clinical Profile

Most participants were middle-aged or elderly, predominantly 56–75 years, consistent with global trends showing higher CAP

susceptibility.[20] Age did not differ significantly across Expanded A-DROP score groups (p = 0.166) and was not an independent predictor of 14-day mortality. This contrasts with previous studies,[21,22] which predicted worse outcomes with increasing age, possibly reflecting our broader age range (33–85 years) and fewer very elderly participants.

Gender distribution was nearly equal, with a slight female predominance (51.3%), and no significant differences in 14-day mortality or ICU admission were observed. This diverges from global data, where male sex has been linked to increased severity and mortality,[23] likely due to comparable comorbidity burden, short 14-day follow-up, and standardized hospital care in our cohort.

The symptom and physiological profiles of patients in our cohort align with established CAP patterns,[1,15,20] reinforcing the systemic impact of the disease beyond the lungs. Culturally specific expressions such as "ghabraahaat" underscore the need to contextualize symptom interpretation in Indian practice for timely recognition of respiratory distress. Altered sensorium, tachycardia, hypotension, and hypoxemia reflect multiorgan involvement and severe illness, supporting their inclusion in severity scoring tools.

The high prevalence of chronic conditions such as diabetes, hypertension, and COPD in our cohort aligns with prior Indian and international studies demonstrating their role in predisposing patients to severe CAP.[20,24,25] Additional factors, including tobacco exposure,[6] immunosuppression,[7] renal and cardiac dysfunction,[17] and malignancy,[12] contribute to physiologic vulnerability and poorer early outcomes. Notably, malignancy showed a strong association with 14-day mortality, supporting its inclusion in the Expanded A-DROP score, unlike CURB-65 or PSI, which do not account for cancer-related risk. Recent hospitalization or prior antibiotic use further underscores the complexity of CAP in tertiary-care populations, highlighting the potential for resistant pathogens and overlapping healthcare exposures.[8,26]

Laboratory parameters in our cohort reflect the systemic impact of CAP and the multifaceted physiologic stress experienced by hospitalized patients. Markers of cardiac strain, such as NT-proBNP,[16,17] and tissue hypoperfusion, such as lactate,[19] highlight early organ compromise, supporting their inclusion in multidimensional scoring systems such as Expanded A-DROP. Although these individual biomarkers did not retain independent significance in multivariate analysis, likely due to overlap with composite variables, they remain valuable indicators of severity and early warning signals for adverse outcomes. Hypoalbuminemia and renal dysfunction similarly underscore systemic vulnerability,[12,18,27] reinforcing findings from prior studies linking these parameters to increased mortality, prolonged hospitalization, and higher illness burden. Hematological alterations and mild hepatic derangements further illustrate the widespread inflammatory and organ-level effects of CAP. Collectively, these laboratory findings validate the importance of integrating extrapulmonary markers into severity assessment, enhancing risk stratification and prognostic accuracy beyond vital signs alone.

Expanded A-DROP Score Distribution and Clinical Implications

The range of Expanded A-DROP scores in our cohort reflects the full spectrum of CAP severity, from relatively mild illness to multiorgan involvement. The predominance of higher-risk patients is unsurprising in a tertiary-care setting, where more severe cases are typically referred, and underscores the importance of early and accurate risk assessment. Notably, age alone did not independently predict 14-day mortality, reinforcing prior observations[12] that composite scores capturing physiological and biochemical derangements provide a more nuanced and reliable measure of patient risk than age-based metrics alone.

The Expanded A-DROP score effectively stratified patients by severity, correlating with key outcomes such as hospital stay, ICU requirement, and short-term mortality.[12,27] Higher scores reflected a progressive increase in illness burden and resource utilization, underscoring the score's utility in anticipating critical care needs and prolonged hospitalization. While previous studies primarily validated its role in mortality prediction,[12] our findings extend this evidence by demonstrating a clear gradient in ICU admission and postdischarge risk, emphasizing the importance of vigilant follow-up even after hospital discharge.[28]

In univariate analysis, several clinical and laboratory parameters—including neurological status, hypoxia, hypotension, tachycardia, lactate, NT-proBNP, and malignancy—emerged as significant predictors of 14-day mortality, reflecting the diverse organ-level stress imposed by CAP.[10,12,16–19,29] These findings underscore the prognostic relevance of systemic decompensation and comorbidity burden, consistent with prior studies highlighting the vulnerability of patients with cardiovascular compromise, cognitive impairment, or underlying malignancy.

When considered in a multivariate model, however, only the Expanded A-DROP score retained independent predictive significance.[14] This attenuation of individual variables likely reflects collinearity among overlapping physiologic derangements and emphasizes the advantage of composite scoring systems that integrate multiple domains into a singular, robust metric. By capturing cardiovascular, neurological, renal, and oncological risk factors simultaneously, the Expanded A-DROP score demonstrates superior prognostic stability compared to isolated markers, reinforcing its role as a practical and multidimensional tool for early risk stratification in CAP.

Prognostic Performance

The ROC analysis demonstrated excellent discrimination (AUC 0.871), with ≥5 as the optimal threshold for predicting 14-day mortality. This aligns with prior validation studies[12] and affirms the applicability of the Expanded A-DROP score in Indian patients. The high sensitivity ensures that most at-risk patients are identified early, while reasonable specificity minimizes over-triage—an important consideration in resource-limited healthcare systems.

Strengths and Limitations

The strength of this study lies in its prospective design, real-time data capture, and comprehensive evaluation of the full Expanded A-DROP score. It is probably the first study to test the applicability of the Expanded A-DROP score in an Indian setting. Limitations include a modest single-center sample, underrepresentation of high-risk subgroups, absence of serial biomarker measurements, lack of direct CURB-65 comparison, and focus on 14-day mortality without longer-term follow-up.

Conclusion

Overall, the Expanded A-DROP score effectively captures the multidimensional severity of CAP, integrating renal, cardiac, and oncological risk factors, and serves as a practical tool for early risk stratification, ICU triage, resource allocation, and postdischarge monitoring using routinely available clinical and laboratory parameters, enhancing reliability and applicability in Indian tertiary-care settings.

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