Further investigations were conducted, including an electrocardiogram (ECG) that showed sinus tachycardia (Fig. 1) and a normal two-dimensional echocardiogram (ECHO). Routine blood tests, such as complete blood counts, liver and kidney function tests, and thyroid profiles, were all normal. Additionally, chest X-rays and CT chest with virtual bronchoscopy showed no abnormalities. A cardiologist was consulted, and an electrophysiology study was conducted. The basal ECG was normal, except for sinus tachycardia, with a rate of 140/minute. No manifest preexcitation was found. During V pacing, VA conduction was concentric and decremental until 350. Although no sustained tachycardia was induced, slow pathway modification was performed due to the presence of ECHO, AH jump, recurrent palpitation, and cough. Successful RFA of the slow pathway region was performed at the M2–M1 junction. After a 30-minute wait and vigorous stimulation protocol, no tachycardia was induced. Following the procedure, the patient’s condition improved significantly, and her heart rate remained stable at 75 beats/minute (Fig. 2). The cough completely disappeared. At the 3- and 6-month follow-ups, no complaints recurred, and the patient remained asymptomatic.

Supraventricular tachycardia (SVT) is an arrhythmia that arises above the bundle of His and results in heart rates of >150 beats/minute. It has an electrophysiologic basis of reentry or automaticity. Palpitations, pulsations in the neck, discomfort in the chest, dyspnea, hyperventilation, lightheadedness, and anxiety are common SVT symptoms. Cough, chest pain, diaphoresis, nausea, presyncope, and syncope are uncommon symptoms that SVT patients may experience.1

Some cases of ventricular arrhythmia and supraventricular arrhythmia have been documented in the literature when they occur with the symptom of coughing, which may first be mistaken for a respiratory tract condition. The authors hypothesized two potential reasons for the arrhythmia that caused cough in these patients: increased pulmonary artery blood flow generating ventricular arrhythmia and anatomically close contact between phrenic nerve and atrium causing the supraventricular arrhythmia.2–4

After ruling out other potential causes, the chronic cough was completely alleviated by RFA. This case also emphasizes the importance of careful physical examination in diagnosing the disease on time. A similar case in the past was reported where a man was diagnosed with cardiac arrhythmia after 15 years of cough symptoms.5

References


We read with interest an article titled “Diagnostic Approach to Extrapulmonary Tuberculosis by Cartridge-based Nucleic Acid Amplification Test” published in J Assoc Physicians India 2023; 71(6):34–37.

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Letter to Editor in Response to Article “Diagnostic Approach to Extrapulmonary Tuberculosis by Cartridge-based Nucleic Acid Amplification Test”
Extrapulmonary Tuberculosis by Cartridge-based Nucleic Acid Amplification Test” published in Journal of the Association of Physicians of India.\textsuperscript{1} We have the following comments to offer:

- **Authors** have compared cartridge-based nucleic acid amplification test (CBNAAT) results with Ziehl–Neelsen smear, fluorescence microscopy smear, and culture on Löwenstein–Jensen media to find out the sensitivity and specificity of CBNNAT. Ideally, CBNAAT should be compared with culture as a gold standard, but extrapulmonary tuberculosis (EPTB), being a paucibacillary disease, has a low yield on culture. To overcome this issue, authors should have compared the diagnostic yield of CBNAAT with the composite reference standard, which is defined by clinical, radiological, laboratory, and histopathological findings and treatment response to antituberculosis therapy at the end of 6 months.\textsuperscript{2,3}

- The present study seems to convey that CBNAAT alone can lead to the diagnosis of EPTB and has not at all emphasised the role of other modalities of investigation which need to be considered for the diagnosis of EPTB. Diagnosis of EPTB requires a composite approach comprising of clinical and radiological examination, smear examination, cytology, histopathology, acid-fast bacillus (AFB) culture and CBNAAT of tissue aspirate and biopsy. Since the sensitivity and specificity of CBNAAT against culture varies significantly for lymph nodes, cerebrospinal fluid, and pleural fluid, relying solely on CBNNAT can lead to false positive and false negative results.\textsuperscript{4} As per the guidelines for EPTB in India,\textsuperscript{4} CBNAAT should be used as an additional test to conventional smear microscopy, culture and cytology in fine needle aspiration cytology specimens.

- Authors have mentioned that CBNAAT was introduced for rapid diagnosis of pulmonary tuberculosis and as a replacement for sputum microscopy. Undoubtedly, CBNAAT has revolutionized the rapid diagnosis of tuberculosis, but in no way has this test replaced sputum microscopy. Sputum microscopy remains an essential part of not only the initial diagnosis but also for monitoring response to treatment and for determining cure.\textsuperscript{5}

- Authors have mentioned that CBNAAT also detects nontuberculous *Mycobacterium* (NTM). This is not correct since CBNAAT can detect only *Mycobacterium tuberculosis*. In fact, CBNAAT has excellent positive predictive value in the setting of AFB smear-positive but CBNAAT-negative specimens for distinguishing tuberculous from nontuberculous mycobacteria (>95%).\textsuperscript{6}

- In the discussion, it has been mentioned that the usage of CBNAAT in the diagnosis of EPTB has been low because of a lack of awareness, and have supported this by quoting references from before 2013. This statement does not seem to be true since World Health Organization introduced CBNAAT for the diagnosis of EPTB in 2013, and since then, it has been widely used in the National Tuberculosis Elimination Program and by private doctors.

**References**


