Pleural nodules: A rare presentation of extrapulmonary tuberculosis

Sir,

The two forms of clinical manifestation of tuberculosis (TB) are pulmonary TB and extrapulmonary TB (EPTB). EPTB refers to TB involving organs other than the lungs (e.g., pleura, lymph nodes, abdomen, reproductive organ tract, skin, joints and bones, or meninges). Pleural involvement in the form of a pleural effusion is usually seen in up to 38% of primary TB and up to 18% of postprimary TB.\[1\] Empyema, calcification, and residual pleural thickening are alternative varieties of pleural TB involvement and are usually seen in association with parenchymal disease. In roughly two-thirds of cases, there is no associated parenchymal lesion on the chest radiograph; nonetheless, tubercle bacilli are often found in biopsy specimens of pleural tissue.\[2\] Pleural nodules as a presentation of TB without parenchymal involvement are extremely rare. There are only a few reports on the atypical presentation of pleural TB. We tend to report an uncommon case, presenting as pleural nodules on contrast-enhanced computed tomogram (CECT) chest, which was proved to be of tubercular etiology on microscopic anatomy.

A case of a 29-year-old male presented with complaints of dry cough of 3 months period. He had a pleuritic chest pain and weight loss for 1 month. There was no history of any other relevant symptoms such as fever, loss of appetite, or weight loss. He had no history of tobacco abuse or history of exposure to asbestos. The general physical examination was unrevealing. The chest examination findings were suggestive of left side pleural effusion. His routine hemogram, urine examination, and renal and liver function tests were within normal limits. The investigations for HIV and hepatitis B virus were normal. X-ray of the chest showed a peripheral opacity in the left lower zone; however, the left costophrenic angle was clear [Figure 1]. We suspected a patch of pneumonia or an encysted pleural effusion. The chest examination findings were suggestive of left side pleural effusion. His routine hemogram, urine examination, and renal and liver function tests were within normal limits. The investigations for HIV and hepatitis B virus were normal. X-ray of the chest showed a peripheral opacity in the left lower zone; however, the left costophrenic angle was clear [Figure 1]. We suspected a patch of pneumonia or an encysted pleural effusion. Because the findings of physical examination favored a pleural effusion, we planned and did a diagnostic thoracocentesis but failed to yield any fluid. Hence, we got a CECT of the chest that discovered multiple pleural nodules of various sizes with the biggest being of 1.2 cm × 2.9 cm on the right side with bilateral thickening of pleura, without any proof of pleural effusion [Figures 2 and 3].
tomography (CT)-guided fine-needle aspiration from the nodule was done, and cytology of fine needle aspiration material revealed granulomas comprising epithelioid cell, Langhans giant cells with caseous necrosis suggestive of tubercular pathology [Figure 4]. Antitubercular therapy under Revised National TB Control program was started
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that led to the improvement of the symptoms. X-ray chest done at the completion of treatment showed clearing of the lesion [Figure 5]. CECT scan of the chest, done later on, showed marked decrease/clearing of the nodules [Figure 6a and b].

TB can involve any organ/system within the body. Whereas phthisis is the most typical presentation, EPTB is also an important clinical problem constituting about 15–20% of all cases of TB in immunocompetent patients and accounts for over 50% of the cases in HIV-positive individuals.[3] Pleural involvement of TB presents as effusion, empyema, or pleural thickening. The presentation of pleural nodules as was seen in our case as a presentation of TB has been seldom reported in the literature.[4,5]

The major differential diagnostic issues in a patient with multiple pleural nodules and masses are malignant mesothelioma, pleural lymphoma, hematogenous pleural metastases, malignant thymoma, and on rare occasion sarcoidosis.[6] Primarily based on the CECT findings, we were also suspecting it to be a malignant pathology. We reached a diagnosis of TB on cytological examination of CT-guided FNAC of the nodule.

A presentation of pleural nodules in conjunction with parenchymal involvement in cases of TB might not and does not present a diagnostic perplexity; however, an isolated presentation of pleural nodules without any concomitant parenchymal involvement or lymphadenopathy could result in a problem in reaching an accurate diagnosis. CT-guided FNAC or thoracoscopic visualization of the nodules and biopsy remain the modality of choice in distinguishing the proper etiology.

To conclude, tuberculous involvement of the pleura is incredibly common, and frequently the presentations of effusion or empyema do not cause any issue in diagnosis. Although rare, TB ought to be thought-about as one of the differential diagnoses while evaluating isolated pleural nodules, notably in areas wherever TB is extremely common such as in a country like India. This patient has made us wiser and educated us that TB can present in any form. CT-guided FNAC or thoracoscopic biopsy of the nodules and histology are a must to achieve the proper diagnosis.

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