

Case report

Pleuritic pain in a patient with rheumatoid arthritis: *Second time around might be different*

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(Submitted 12 March 2022; accepted 14 March 2022)

Keywords- Rheumatoid arthritis pleuritis, rheumatoid pleural effusion, pleuritic pain, secondary spontaneous pneumothorax

Case Study

A 79-year-old man ex-smoker with a medical history of Rheumatoid Arthritis under corticosteroids and leflunomide presented to the Emergency Department of our tertiary hospital reporting right pleuritic chest pain and mild dyspnea for one week. He didn't report any fever, weight loss, night sweats or hemoptysis. The chest x-ray [Fig. 1] revealed a blunting of the right costophrenic angle and an airspace opacification at the right upper lung field.



Fig. 1 X-ray of the first admission showing right pleural effusion

The subsequent chest computed tomography [Fig. 2] confirmed the existence of right pleural effusion and additionally a thick-walled abnormal gas-filled space

within the lung most consistent with a cavitated rheumatoid node.

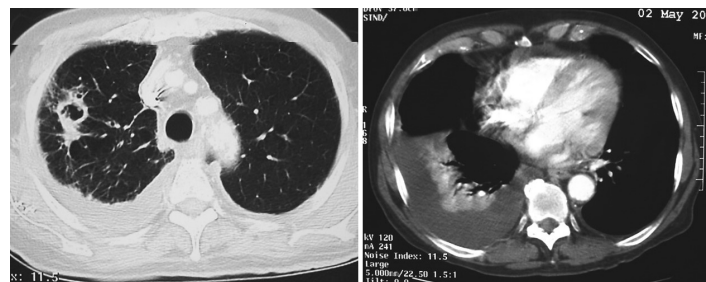


Fig. 2 Chest computed tomography of the first admission showing a right pleural effusion and a pulmonary cavity in the right lung

A diagnostic thoracentesis was performed. The examination of the pleural fluid revealed a predominantly lymphocytic (67%) exudate with low glucose value (18 mg/dl), low pH (7.18), high value of lactate dehydrogenase (768 IU/L) and high value of adenosine deaminase (83.5 U/L). Sputum and pleural fluid microscopic examination and cultures both for common bacteria and acid-fast bacteria were negative. A bronchoscopy was performed, and no evidence of malignancy were found macroscopically or in the cytopathological examination of bronchial secretions. The high adenosine deaminase content was highly suggestive of tuberculosis, mesothelioma, or lymphoma but a full body computed tomography was negative for solid tumor, pleural thickening or enlarged lymph nodes. Cytologic examination of pleural fluid was positive for Naylor's triad that comprises: i) granular/necrotic debris, ii) multinucleated giant cells and iii) spindled histiocytes. In

addition, both serum and pleural fluid rheumatoid factor levels were elevated. Taken together, those findings supported the diagnosis of a pleural effusion related to rheumatoid arthritis, given that other possible causes were previously excluded. After his immunomodulatory treatment was modified, the pleural effusion decreased, and the patient was discharged with a 3-month follow up without any pleural fluid reproduction. However, six months later, the patient presented once again to our Emergency Department with right pleuritic chest pain and dyspnea with acute onset which resembled the symptomatology of the initial visit. The chest x-ray [Figure 3] showed the right visceral pleural edge as a thin white line with no lung markings seen peripherally to this line, while the peripheral space was radiolucent compared to the adjacent right lung.



Fig. 3 X-ray of the second admission showing a pneumothorax of the right hemithorax

Those radiological findings indicated a right pneumothorax, possibly owing to rupturing of the previously imagined

cavitated rheumatoid node. A chest tube was inserted into the right pleural space, the leaked air was effectively drained, and the lung expanded. The patient was stabilized and was discharged from the hospital after few days.

AUTHORS CONTRIBUTION

ZD had the original idea, NGZ scripted the original draft. IED and SIS have drafted parts of the draft and revised the final version. All authors approved the final version of the manuscript.

CONFLICT OF INTEREST

All Authors declare no conflict of interest.

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