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Rheumatoid Arthritis- Unique Combination of Rheumatic, Cardiac and Pulmonary Manifestation of a Multisystem Disorder.

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ABSTRACT

Rheumatic arthritis is a common inflammatory disease but combination of cardiac valvular dysfunction involving aortic valve calcification, tricuspid regurgitation and right atrioventricular enlargement with interstitial involvement of lung is very rare manifestation of this multisystem disorder.

Keywords: RA-rheumatoid arthritis, RF-Rheumatoid factor, ILD-Interstitial Lung Disease.

INTRODUCTION

Rheumatoid arthritis is a chronic inflammatory disorder of unknown etiology marked by symmetric, peripheral polyarthritis.it is most common form of chronic inflammatory arthritis often result in joint damage and physical disability. Extra articular involvement includes heart, lung skin etc. The most prevalent valve disease in rheumatoid arthritis is mitral valve insufficiency, varying from 30 to 80% in small case series followed by aortic valve insufficiency varying from 9 to 33%. Diffuse interstitial pulmonary fibrosis in rheumatic arthritis tends to occur more often in rheumatic factor positive male patients with longstanding nodular disease. The clinical presentation and course of pulmonary fibrosis in rheumatoid arthritis is similar to that of idiopathic pulmonary fibrosis.

CASE REPORT

A 44 year male clerk by occupation presented with since one year gradual in onset, progressive with orthopnoea which increased over recent seven days. Breathlessness was associated with productive cough whitish mucoid without any hemoptysis.

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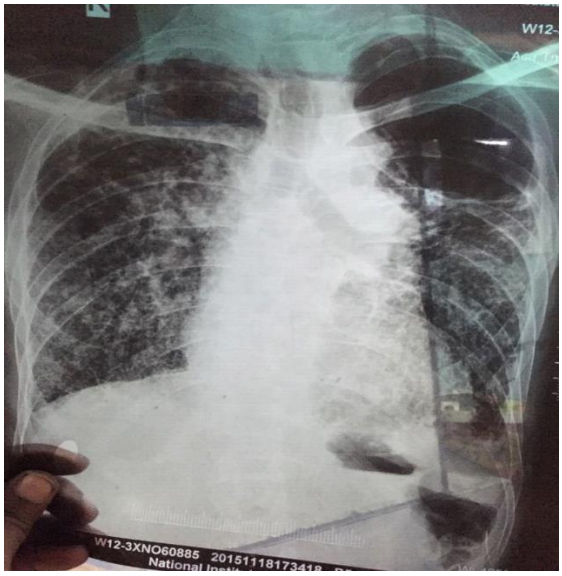
Patient was diagnosed case of rheumatoid arthritis since 9 years and was taking tablet azathioprine 50mg B.D. and tablet leflunomide 20mg O.D. patient was on domiciliary oxygen therapy for past five months. On examination he was average built conscious oriented, B.P.=100/70mm of Hg in right arm sitting, Respiratory rate =24/min and clubbing in both hands and lower limbs. The left wrist showed radia@l deviation with the digits showing ulnar deviation. There was no tenderness or swelling over any joint. The right hand showed similar deformities. Joint mobility was found restricted in the right

shoulder, left hip without any swelling and tenderness. Chest auscultation revealed bilateral vesicular breath sounds with bilateral fine late inspiratory crepitations of leathery character more at the lung bases. Cardiovascular examination revealed tachycardia with left parasternal heave and louder P 2. Pansystolic murmur was heard at tricuspid area that accentuate with inspiration. A systolic ejection click was heard in left third intercostal space radiation to carotid artery. Rest of the systemic examination was normal.

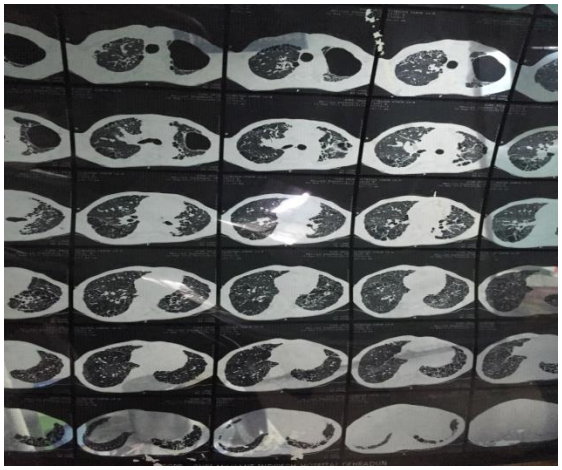
Laboratory examination

Revealed haemoglobin 13.6 gm/dl, TLC 7000 (76% N,20%L,4%M).Platelet count 1,80,000.Liver and renal function tests were within normal limit.

Chest X-ray- PA view showed diffuse reticulo-nodular infiltrates with an air bullae in left upper lobe of the lung and cardiomegaly and prominent aortic knuckle.



HRCT chest- was done which revealed significant honey combing with fibro-interstitial thickening in bilateral lung fields, mosaic perfusion in visualised bilateral lung bases with thin walled air filled cavity measuring 10*8*6 cm in left apical region with aortic valve calcification.



Echocardiography- was done which revealed moderate aortic stenosis with pressure gradient of 40 mm Hg with thickened calcified aortic valve, moderate tricuspid regurgitation and mild right atrium and ventricular enlargement.

Pulmonary function test- revealed restrictive pattern of lung disease. Patient was managed with oxygen therapy, low dose diuretic and injectable antibiotics.

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DISCUSSION

Extra articular complications usually occur after the onset of arthritis. The pattern of pulmonary involvement in rheumatoid arthritis includes pleural effusion, Interstial lung disease studies in patients with RA-associated ILD (RA-ILD) suggest that the usual interstitial pneumonia (UIP) pattern is more common in this patient population. High-resolution CT (HRCT) scans appear accurate in identifying UIP pattern in many patients with RA-ILD. Nonspecific interstitial pneumonitis is the second most common pattern, occurring in ~11–32% of patients. The cumulative incidence of any grade of mitral regurgitation (MR) (24.6% ± 2.4% versus 15.6% ± 2.0% at 10 years; p=0.015) and tricuspid regurgitation (TR) (23.1% ± 2.4% versus 16.3% ± 2.1%; p=0.045) were significantly higher in patients with RA compared to non-RA subjects.[6]

The treatment of rheumatoid arthritis with DMARDs is also not free from side effects. Treatment with leflunomide and methotrexate are more commonly associated with ILD. Treatment with Leflunomide as happened in this case increase the risk of ILD as compared to general population.[5]

The case presented is a unique combination of rhueumatologic, pulmonary and cardiac manifestations of a truly multisystemic disease.

CONCLUSION

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