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Pulmonary Medicine

A RARE CASE OF POST TUBERCULAR PLEURAL EFFUSION WITH SEROPOSITIVE SYSTEMIC LUPUS ERYTHEMATOSUS WITH NSIP PATTERN INTERSTITIAL LUNG DISEASE

Dr Sagar Kolte* Junior resident, Department Of Respiratory Medicine, Nkpsims and RC Nagpur. *Corresponding Author

Dr Anil Sontakke Professor and HOD, Department of Respiratory Medicine, Nkpsims and RC Nagpur.

Dr Saood Ali Associate professor, Department of Respiratory Medicine, Nkpsims and LMH & Research centre, Nagpur

ABSTRACT Connective tissue disorders like systemic lupus erythematosus can have serious pulmonary complications like ILD. In this case report we had studied 25year male patient who came to OPD of Department of Respiratory Medicine NKPSIMS AND RC Nagpur Maharashtra, with complaint of breathlessness on exertion since 3-4 years and was on medication. Patient was case of post tubercular pleural effusion with Systemic Lupus Erythematosus(seropositive) with ILD. X ray chest showed prominent broncho-vascular markings in bilateral lung lobes. Pulmonary Function test showed Moderate Restriction with moderate obstruction with small airway disease. ANA & Anti-cardiolipin antibody tests were positive. Patient got symptomatically relief after starting tab Deflazacort (oral steroids) and inhaled corticosteroids formoterol and beclomethasone (Inhaler) with hydroxychloroquine tablet. Thus, concluding that early treatment of SLE leads to better remission of ILD.

KEYWORDS :

INTRODUCTION:

Connective Tissue Disorders can have co-existent pulmonary complications like Interstitial Lung Disease (ILD) over a course of time. ILD can be sometimes a sole presentation of the underlying connective tissue disorders like rheumatoid arthritis, systemic sclerosis, polymyositis, dermatomyositis, Sjogren's syndrome systemic lupus erythematosus or Mixed Connective Tissue Disorders (MCTD). Association of ILD with Systemic Lupus Erythematosus (SLE) is rarely seen in less than 5% of the affected individuals.[1]

Infections contribute to a significant burden of morbidity and mortality in Systemic Lupus Erythematosus (SLE). The higher incidence of opportunistic infections in patients with SLE results from inter-play of various factors including impaired cellular immunity and defective phagocytic function in SLE as well as the effects of various immunosuppressive agents used to treat SLE.[2]

Systemic lupus erythematosus (SLE) can present with a wide array of clinical and immunological abnormalities. Pulmonary manifestations of the disease include disorders of the lung parenchyma, pleura, and pulmonary vasculature. Furthermore, some SLE therapies predispose to an increased risk of respiratory infections.[3]

Clinical assessment of patients with SLE should routinely consider careful evaluation for respiratory involvement. Symptoms including dyspnea, pleuritic chest pain, reduced exercise tolerance, cough, and hemoptysis should prompt investigation for potential underlying lung disease.[4]

Case Report:

A 25 years old male patient came to OPD of Department of Respiratory Medicine NKPSIMS and LMH & Research centre Nagpur Maharashtra with complains of Dyspnoea on exertion and dry cough and joint pain since 6 months. Patient was a known case of post tubercular pleural effusion. Patient was not improved symptomatically after taking AKT and hence come with the un-relieved Dyspnoea. Patient was further evaluated for serological markers and rheumatologist as well as neurologists' opinion was taken. We had described the clinical presentation, investigations and outcome of this case.

X ray chest showed prominent Broncho-vascular markings in bilateral lower zones of lungs with peripheral reticular opacities in Bilateral lung fields (Image 1). Pulmonary function test showed Moderate Restriction with Moderate Obstruction with Small Airway Disease, DLCO was Normal. HRCT thorax showed Multiple pleuro-parenchymal bands in bilateral lower lung zones with Few centrilobular nodules with ground glass opacities are noted in lateral segment of right middle lobe suggestive of NSIP Pattern ILD. (Image 2)

ANA immunoblot test & Anti Cardiolipin Antibody was Positive. Anti-PM/SCL antibody was Borderline Positive. 2D ECHO was normal. Six Minute Walk Test showed No Desaturation. Arterial Blood Gas (ABG) suggestive of no hypoxemia. CT Pulmonary Angiography showed no pulmonary thromboembolism. Nerve Conduction Velocity and Repetitive Nerve Stimulation Study (NCV& RNS) showed Mild Phrenic Nerve Dysfunction (Left >Right) Slightly reduced nerve conduction velocity and delayed latency.

For treatment, patient was started on tab Deflazacort (oral steroids) and inhaled corticosteroids combination of Formoterol and Beclomethasone (Inhaler) with hydroxychloroquine tablet, tablet Pyridostigmine (60mg OD) and tablet Prednislolone in tapered doses, tablet Choline with selenium with Tablet Azathioprine.

DISCUSSION:

SLE associated ILD can be asymptomatic in many cases but if manifest symptoms, will present as Dyspnoea on exertion and may be present with Renaud's phenomenon, rashes, joint stiffness attributed to that particular connective tissue disorder. Abatement of Respiratory symptoms with steroids with immunosuppressants with DMARDS will be the mainstay line of management in SLE associated ILD patients.[5]

Enomoto et al. reported that the most frequent onset of SLE-ILD at diagnosis was chronic onset (63.6%), followed by subacute (20.0%) and acute (12.7%) [6]. The frequent patterns on high-resolution CT were NSIP + OP pattern (25%), OP pattern (22%), NSIP pattern (13%), and DAD pattern (2%). In the present case, ALP was suspected based on the acute onset, and DAH was suspected based on the chest CT findings. ALP and DAH have been described as the major forms of severe pulmonary involvement in SLE. They are characterized by the sudden onset of non-specific symptoms including dyspnea, cough, fever, pleuritic chest pain, and, occasionally, hemoptysis [7].

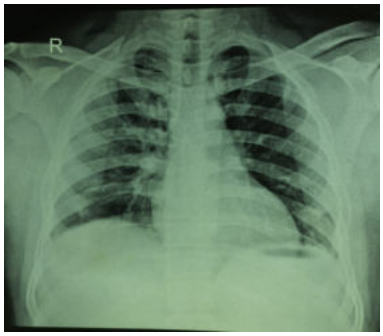
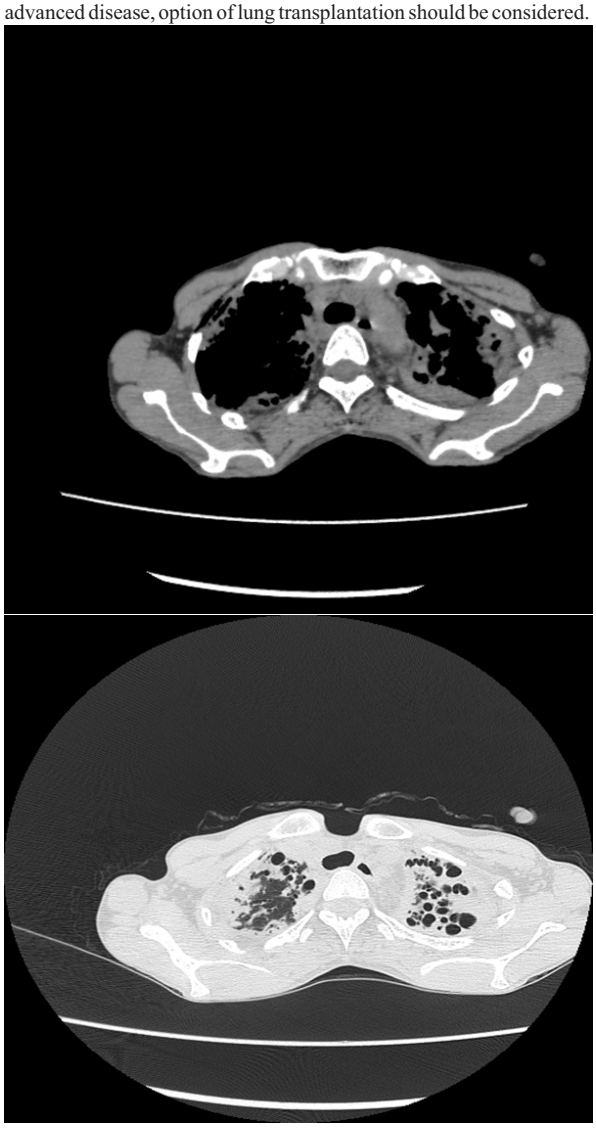


Image -1 Chest X ray showing Bilateral Reticular infiltrates in SLE associated ILD

CONCLUSION:

Approach to patient presenting with prolonged respiratory symptoms along with dermatological and rheumatological manifestations includes careful history and physical examination, with a focus on underlying aetiology of ILD. Suspicion of connective tissue disorder associated ILD will be considered if patient having Dyspnoea on exertion without any known airway disease for a prolonged time period along with any rheumatological symptoms and signs. In severe advanced disease, option of lung transplantation should be considered.



Images 2 &3 - HRCT Thorax Showing Bilateral Reticular Opacities In SLE -ILD

NSIP – Non Specific Interstitial Pneumonitis
SLE – Systemic Lupus Erythematosus
ILD – Interstitial Lung Disease

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