Pulmonary Infiltrates with Eosinophilia-Allergic Granulomatosis of Churg and Strauss


A 35 year old female presented with history of asthma for six months, pain left ankle and restriction of the dorsiflexion of left foot of two weeks duration. Respiratory system examination revealed bilateral wheeze. Neurological examination revealed left foot drop and sensory loss over the anterolateral aspect of distal left leg. Examination of other systems was normal. On peripheral smear examination eosinophilic leucocytosis was observed. Differential leucocyte count was 30% neutrophils, 5% lymphocytes, 65% eosinophils and absolute eosinophil count was 26.1 × 10⁹/l (Figure 1). Erythrocyte sedimentation rate (46 mm/h) and C-reactive protein (60 mg/L) were raised. Serum IgE level was 314 kUA/L (normal < 64). Investigations for autoantibodies revealed positive antineutrophil cytoplasmic antibody and the pattern was pANCA. Antinuclear antibody and rheumatoid factor were negative. Stool for ova, parasites and cysts were negative. Complete urine analysis was normal. Pulmonary function tests had severe degree of obstruction. Chest X-ray revealed bilateral pulmonary infiltrates (Figure 2A). CT chest showed areas of scattered ground glass opacities in both lung fields with superimposed intralobular and interlobular thickening and gave crazy-paving pattern (Figure 2B). The patient was having syndrome of pulmonary infiltrates with eosinophilia and was diagnosed as allergic granulomatosis of Churg and Strauss.

Pulmonary infiltrates with eosinophilia comprises a heterogeneous group of distinct individual diseases characterised by eosinophilic pulmonary infiltrates and peripheral blood eosinophilia. These syndrome are grouped into those where the aetiology is known i.e. allergic bronchopulmonary mycoses, parasitic infestations, drug reactions and eosinophilia-myalgia syndrome and those with idiopathic aetiology i.e. Loeffler’s syndrome, acute eosinophilic pneumonia, chronic eosinophilic pneumonia, allergic granulomatosis of Churg and Strauss and hypereosinophilic syndrome.

Churg-Strauss syndrome (CSS), also known as allergic granulomatous angiitis, is a rare disorder characterised by the presence of asthma, eosinophilia and small-to-medium sized vessel vasculitis. The American College of Rheumatology has proposed six criteria for the diagnosis of CSS in adults; confirmation of at least four being necessary. These are: (1) asthma, (2)
eosinophilia of more than 10% in peripheral blood, (3) paranasal sinus involvement, (4) pulmonary infiltrates (nonfixed), (5) histological proof of vasculitis with extravascular eosinophils, and (6) mononeuritis multiplex or polyneuropathy. Our patient fulfilled the criteria for the diagnosis of CSS. The treatment is corticosteroid therapy. Aggressive approach with pulse doses of intravenous corticosteroids combined with other immunosuppressive agents, such as cyclophosphamide, azathioprine, and methotrexate is required in fulminant multisystem disease.