Original Research Paper

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Respiratory Medicine

DIFFUSE ALVEOLAR HEMORRHAGE IN THE CASE OF MICROSCOPIC POLYANGITIS.

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ABSTRACT Microscopic Polyangitis is a necrotizing small-vessel vasculitis causing necrotizing crescentic glomerulonephritis and pulmonary capillaritis with a propensity to involve multiple organs. MPA has a frequency distribution of approximately 3.3 per 100,000 individuals worldwide and 3.94% in India . A 22 year old female patient presented with the chief complaints of recurrent episodic hemoptysis, moderate in amount for the last 6 months and low grade fever for 15 days. On further examination she was diagnosed with MPA. She is currently on corticosteroid therapy and well with the treatment.

KEYWORDS :

INTRODUCTION

Microscopic polyangiitis is a rare disease. It is a necrotizing small-vessel vasculitis with a propensity to involve multiple organs. The incidence of MPA is approximately 1:100000 per year. Microscopic polyangiitis (MPA) is one of the systemic necrotizing vasculitides that is included in the pulmonary renal syndromes.[1,2,3,4]. MPA is characterized histologically by the involvement of small vessels and the absence of granuloma.[3,5] MPA was initially recognized as a particular type of polyarteritis nodosa (PAN) with, in most cases, rapidly progressive necrotizing glomerulonephritis (RPGN), crescentic glomerulonephritis and sometimes with lung haemorrhage. MPA affects men more than women. Anti-neutrophil cytoplasmic antibodies (ANCA) are positive in MPA patients. Pulmonary involvement is seen in 22% of the patients and mainly characterized with ground-glass attenuation, consolidation, thickening of bronchovascular bundles, and honeycombing on computerized tomography (CT). [6,7,8] We report a patient with an atypical presentation having diffuse alveolar hemorrhage with no other organ involvement.

Case Report

A 22 year old female patient was admitted in our hospital with the chief complaint of recurrent episodic hemoptysis, moderate in amount for the last 6 months and low grade fever for 15 days. Patient also had a past history of black colored stools. She was a housewife. Her physical examination was unremarkable including dermatological examination except for the fine crackles heard at lung bases. Pathological laboratory findings were as follow; hemoglobin: 8.2 g/dl, creatinine: 0.8 mg/dl, erythrocyte sedimentation rate:75 mm/h, C- Reactive protein: 112. There was no eosinophilia in peripheral blood smear. Urinalysis was unremarkable and stool examination showed occult blood. ECG and 2 DECHO were normal Chest X ray was normal and High Resolution computed tomography (HRCT) revealed multiple ground glass opacities suggestive of diffuse alveolaer hemorrhage. Bronchoscopy was performed and had increasingly hemorrhagic bronchoalveolar lavage. The bronchoalveolar lavage fluid was tested negative for any bacterial or tuberculosis infection. (BAL AFB/CBNAAT - Negative). Her p-ANCA specific to myeloperoxidase (MPO) levels were positive 5.8 IU/ml (negative < 3.5IU/ml). After Rheumatologist consult, she was diagnosed with Microscopic polyangiitis. We started her on IV Methylprednisolone 1mg/kg/day and then tapered weekly. She showed improvement in her symptoms and was discharged then after and is now on regular follow ups.

DISCUSSION

Alveolar hemorrhage (AH) was reported in 12–79% of the patients with MPA.[6] Subclinic cases of alveolar hemorrhage can occur.[3,5] AH is an important contributory factor to both morbidity and mortality in MPA.[3,6] Our patient was admitted with the symptom of hemoptysis. Bronchoscopical and radiological findings (ground glass opacities) were associated with AH. ANCA antibodies are useful diagnostic markers for MPA. Circulating ANCA antibodies are present in 74.5% of patients with MPA. The p-ANCA pattern with antibodies to MPO is most closely associated with MPA. Lauque et al. revealed that p-ANCA antibodies were present in 93% of MPA patient. Presence of c-ANCA was reported in only 8 to 10% of the patients in the literature.[5,6] In this case, p-ANCA with anti-MPO activity was positive.

CONCLUSION:

Vasculitis disorders are uncommon, but are certainly underdiagnosed and unreported.

This case is unique as Microscopic polyangiitis usually presents with renal dysfunction but in this case, patient presented with pulmonary manifestations.

Therefore, further research must be done for this disease and its organ involvement in order to help future physicians with early diagnosis and patients with this disease can be treated well within time.

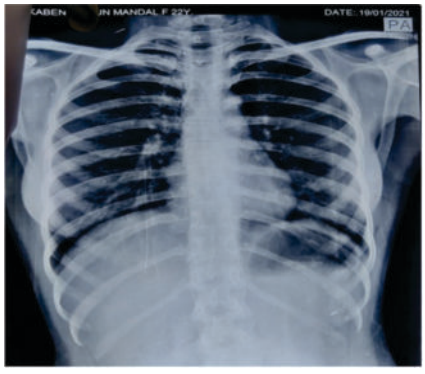

Figure 1- Chest X Ray.

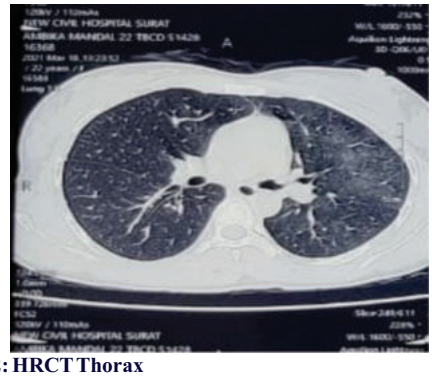

Figure 2: HRCT Thorax

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