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Case Report

A confounding case of pancytopenia

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ABSTRACT

Tuberculosis is one of the major health problems in the developing countries like India. Due to its nonspecific presentation, extra pulmonary TB is diagnosed at later stages. It is an important differential diagnosis for pyrexia of unknown origin (PUO). A 54-year-old male came to hospital with complaints of fever, pain abdomen (on and off), easy fatiguability, reduced appetite, weight loss, breathlessness on exertion for 8 months who completely recovered after starting anti-tubercular therapy.

Keywords: Pancytopenia, PUO, Tuberculosis

INTRODUCTION

Tuberculosis is one of the major health problems in the developing countries like India. Extra pulmonary TB can present as acute, subacute or chronic presentation. The subacute or chronic presentation of extra pulmonary TB is more common than acute presentation. These patients may present with PUO or organ dysfunction. It is an important differential diagnosis for PUO. Due to its nonspecific presentation, extra pulmonary TB is diagnosed at later stages. It can cause various hematological conditions such as anemia, leukemoid reaction, leukopenia, thrombocytopenia, pancytopenia.[1] Reason for pancytopenia may be due to hypersplenism, maturation arrest, hemophagocytic lymphohistiocytosis/ infiltration of bone marrow by caseating or noncaseating granulomas causing reversible or irreversible fibrosis.[2,3] Due to nonspecific manifestations of extra-pulmonary tuberculosis, treating physician faces a huge challenge in diagnosis. This case report showcases that a good clinical suspicion, appropriate diagnosis and treatment, gave an excellent outcome in a patient with extra pulmonary tuberculosis.

CASE REPORT

A 54-year-old male, known case of diabetes mellitus on regular treatment with OHA, came to hospital with complaints of fever- high grade, intermittent type, pain abdomen which was diffuse, easy fatiguability, reduced appetite, weight loss, breathlessness on exertion for 8 months. Patient was treated for the same and history of multiple blood transfusions (8 times) was done previously. No history of lymphadenopathy, rash, joint pains, neck stiffness, head ache, burning micturition, bleeding manifestations, eschar. On physical examination, he was thin built, poorly nourished with pallor, temperature of 102^{o} F. Per abdomen examination showed splenomegaly which was firm in consistency, surface was smooth, non-tender, 8 cm below the left costochondral junction. All the other system examinations were unremarkable.

On evaluation complete blood count showed hemoglobin of 5.2 g/dl, total leukocyte count of 1952 cells/cu.mm, Platelet count was 0.54 lakhs/cu.mm. Peripheral blood smear showed normocytic normochromic anemia. There was a persistent low hemoglobin level despite multiple blood transfusions. ESR, CRP levels were elevated. serum ferritin-1360 ng/ml. Stool for occult blood: negative. Sputum for gram stain, culture sensitivity, CBNAAT was negative. On suspicion of macrophage activation syndrome, bone marrow biopsy was done, which showed normocellular marrow. Direct Coomb's test was negative. USG abdomen and CT abdomen was normal. Chest radiograph was normal, Mantoux test was negative. In

view of persistent symptoms PET scan was done, the report showed Irregular near circumferential mural thickening involving terminal ileum, ileocecal junction and caecum with patchy increased metabolic activity and maximal wall thickness of 14mm with minimal pre-lesioned fat stranding, likely infective-tuberculosis. Multiple prominent mesenteric lymphnodes with minimal patchy metabolic activity. Spleen: Enlarged in size with mild diffuse increased metabolic activity-Likely reactive. Colonoscopy biopsy from ileocecal thickening showed normal pathology.

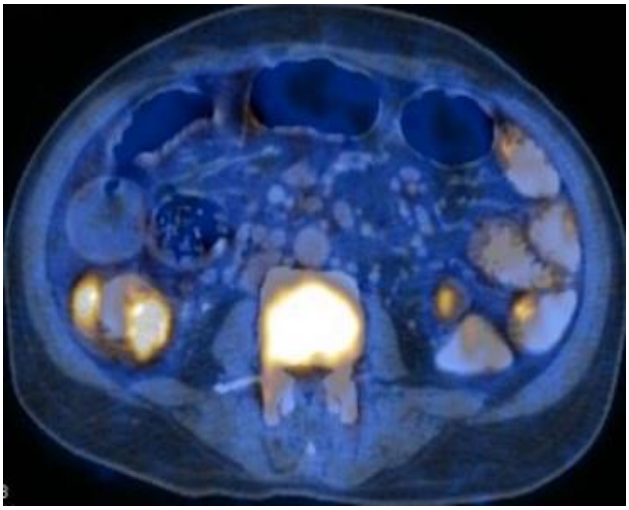

Figure 1: PET scan of ileocecal thickening.

In view of ileoceacal tuberculosis, patient was started on antitubercular treatment (ATT) with a combination of isoniazid, rifampin, ethambutol pyrazinamide was initiated. Patient became afebrile after a week and his blood counts slowly improved. He continued the 4 drug ATT. On subsequent followups patient showed significant improvement with no further episodes of fever, pain abdomen settled eventually. Blood investigations turned completely normal with ATT therapy after 4 weeks.

DISCUSSION

Anemia is the most common hematological manifestation by tuberculosis but others such as leucopenia, leukaemoid reaction, myelofibrotic changes, the haemo-phagocytic syndrome, polycythemia, thrombocytosis, thrombocytopenia, mono-cytosis may present. Tuberculosis can present in many different ways. One of the rare presentations of extra pulmonary TB is pancytopenia. One of the studies of tuberculosis with hematological manifestations mentioned that normocytic normochromic anemia was the most common abnormality.[2] Many studies explain the occurrence of pancytopenia in extra pulmonary TB such as hypersplenism, histocytic hyperplasia and phagocytosis, bone marrow infiltration by tubercular granuloma or occasionally maturation arrest.[4,5] Thrombocytopenia can occur due to deposition of mycobacterial antigen on platelet surface.

In patients with TB who present with fever, organomegaly, cytopenia, elevated serum ferritin and triglyceride levels with evidence of histiocytic hemo-phagocytosis in bone marrow, HLH to be considered. But in this case, no hemo-phagocytosis in bone marrow. Pulmonary Tuberculosis or extra pulmonary tuberculosis may rarely present with pancytopenia and its complete reversal with antitubercular drugs implies that there was no other underlying hematological condition.

CONCLUSION

Extra pulmonary tuberculosis stands as a diagnostic challenge because of their nonspecific presentations. Due to lack of specific clinical features is the main reason for delay in diagnosis and the poor prognosis in case of extra pulmonary tuberculosis. Pancytopenia in extra pulmonary tuberculosis is the rare presentation, PET scan should be considered in such cases at the earliest for the early diagnosis and appropriate treatment. Appropriate diagnosis and early initiation of anti-tuberculosis treatment gave an excellent outcome in this patient.

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