

**Disseminated Tuberculosis Presenting As Massive Splenomegaly And Hypoadrenalism**

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**Type of Publication:** Case Report

**Conflicts of Interest:** Nil

**Abstract**

Disseminated tuberculosis involves almost all organs but clinical manifestations may be obscure till late in the disease. We report the case of a 65 year old malnourished male who presented with fever , abdominal pain, weight loss , pallor ,massive splenomegaly, hypotension ,hyponatremia , in whom bone marrow trephine biopsy showed necrotising granuloma who responded well to anti tuberculosis treatment and steroids.

**Keywords:** Disseminated Tuberculosis, Massive Splenomegaly, Hypoadrenalism, Necrotising Granuloma.

**Introduction:**

Disseminated tuberculosis refers to concurrent involvement of at least two non-contiguous organ sites of body or involvement of blood or bone marrow by tuberculosis (1). We report a case of disseminated tuberculosis presenting with massive splenomegaly and hypoadrenalism. Massive splenomegaly is rare in disseminated tuberculosis.

**Case report**

This is a case of 65 year old tribal male from Wayanad, Kerala, a smoker and alcoholic who presented with complaints of on and off low grade fever for 1 month, associated with loss of weight and loss of appetite. He also had a stretching type of left sided abdominal pain for past

4 days with increased fatigability. There was no history of cough with expectoration, haemoptysis or melena. He takes a mixed diet which is deficient in proteins and vitamins. On examination he was conscious oriented, moderately built and poorly nourished, with pallor, angular stomatitis and glossitis and was looking sick. His blood pressure was 80/60 mm Hg. Multiple small discrete cervical lymph nodes were palpable and there was massive splenomegaly. Other system examination were within normal limits.

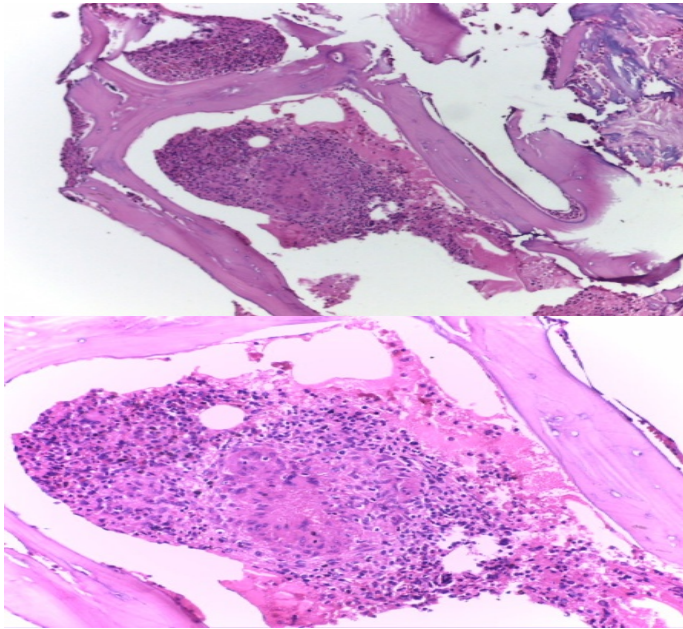
**Investigations**

Haemoglobin	7.2g/dl	RBS	83mg%
MCV	63.8fl	Urea / creatinine	36/1.2
Haematocrit	24%	Serum Na/K	127/3.4
Total wbc count	9600/micro litre	Total / direct bilirubin	1.1/.05
Differential count	N89 L7 M3	Total protein / albumin	6.4/2.1
Platelet	2.02 lakh	AST/ALT	25/16
ESR	105mm at 1 hr		

HIV negative, Mantoux test negative, sputum AFB negative, random cortisol- 9micro gram/dl (normal 7- 28microgram /dl).Peripheral smear showed microcytic hypo chromic anaemia. Ultrasound scanning of abdomen

showed spleen of 18 cm with multiple hypoechoic areas. Echocardiography showed no vegetations. Contrast CT scan of thorax and abdomen showed tree in bud nodule with cavity and surrounding fibrosis involving bilateral lung fields and enlarged spleen with multiple hypoechoic areas possibly granuloma.

Bone marrow trephine biopsy showed necrotising granuloma



He was started on category 1 Anti tuberculosis treatment and replenishment dose of steroids with nutritional supplements and he improved symptomatically.

### Discussion

Malnutrition predispose to the development of disseminated tuberculosis (2). Published data on disseminated tuberculosis is sparse. Males are more frequently affected than females (3). Our patient had constitutional symptoms, anaemia which was multifactorial, nutritional and bone marrow involvement, high ESR, features of hypoadrenalism along with a massive spleen with multiple hypo echoic areas on imaging and we could demonstrate necrotising granuloma in the bone marrow trephine biopsy specimen confirming the diagnosis of disseminated tuberculosis. Bone marrow granuloma may be present in 50% of cases but yield is

greater when anaemia, leucopenia and monocytosis are present (5). Tuberculosis granuloma usually shows the presence of Langhans giant cells and caseating necrosis in 60-70% of cases. Overt clinical features of adrenal insufficiency appear only after destruction of more than 80-90% of both adrenal glands. Asymptomatic patients with subclinical adrenal insufficiency may become symptomatic during stressful situations such as acute and chronic infections, which require increased release of adrenocortical hormones to meet heightened metabolic demands. Due to the rich vascularity, involvement of adrenal gland frequently occurs following haematogenous dissemination in tuberculosis.

The usual causes for massive splenomegaly are chronic myeloid leukaemia, myelofibrosis, hairy cell leukaemia, kala azar, Gaucher's disease, hyper reactive malarial splenomegaly etc . Hypo echoic lesions in ultra-sonogram of spleen may be infarct, cysts, abscess, granuloma or lymphangioma. Tuberculosis presenting with massive spleen is rare. Tuberculosis of spleen can occur due to disseminated or military form of disease (4). With the availability of modern imaging techniques splenic TB lesions are increasingly being recognized. Evans et al have reported a case of miliary tuberculosis, in a 29year old female who presented with massive hepatosplenomegaly, jaundice and pancytopenia (6). Chandni et al have described a case of 13 year old boy who presented with fever of unknown origin , pancytopenia , and massive splenomegaly whose bone marrow trephine showed caseating granuloma(7).

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