



## An Unusual Case Of Weight Loss

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**Abstract:** The extra pulmonary TB involves 11-16% of all TB patients, out of which 3-4% belong to abdominal TB. Abdominal TB is the 6<sup>th</sup> most common type of extra pulmonary TB. It includes the involvement of GI tract, lymph nodes, peritoneum and/or solid organs. In this article, we present a case of TB Abdomen in a 21-year-old male who presented to General Medicine outpatient department (Sree Balaji Medical College & Hospital) with only weight loss, loss of appetite and nausea as complaint. There were no lung signs or any others signs which could suggest or hint about tuberculosis. There was no history of contacts with any TB individual. It was initially ruled out but later on further examination, we did an USG which showed mild ascites. On analysis of the ascitic fluid, we could diagnose him to have tuberculosis. He was started on anti-tubercular treatment and managed medically without any surgery. One of the commonest features of an infectious disease like TB is fever, which if absent we tend to rule out the disease. Thus, it is important for us clinicians to be more vigilant as even though we rule out a diagnosis, it may on later stages be identified on careful examination and investigation. Our hospital had a similar case where in the patient presented with vague symptoms of diarrhoea and Malena and was later diagnosed as TB stomach and was also managed medically.

**Keywords:** Weight Loss, Usg, Ascites fluid analysis.

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## I. INTRODUCTION

It is estimated that around 2 billion people are infected with tuberculosis of which around 10% are presenting with symptoms. There are many forms of extrapulmonary tuberculosis of which one is abdominal tuberculosis. Immunocompromised people are more prone to infection. It is caused by mycobacterium tuberculosis and it affects virtually every organ in our body. It is believed that our country is home to about 25% of the total TB burden in the world.

### I.1 Case report

A 21-year-old male came to outpatient department (general medicine) of Sree Balaji Medical College and Hospital with complaints of nausea for 2 days, loss of appetite for 1 month, weight loss of about 10kg in 2-3 months. There was a history of myalgia, dry cough for 2 days, passing yellow coloured urine and occasional sputum production. He also complained of hair loss, decreased sleep and restlessness. There was no history of breathlessness/fever/abdominal pain/vomiting/diarrhoea/evening rise of temperature. There was no history of chest discomfort/altered sensorium or loss of consciousness. He was not a known case of hypertension/tuberculosis/bronchial asthma or diabetes. He had history of going to nearby hospitals for similar complaints of weight loss. His sleep was disturbed, appetite was reduced and bowel and bladder irregular. He is not known to consume alcohol or to be a smoker.

### I.2 Examination

He was a moderately built and nourished. He was conscious, oriented, and afebrile. There was no pallor, icterus, clubbing,

lymphadenopathy or edema. His cardio-vascular, respiratory, abdominal and central nervous system examination were normal. His blood pressure was 130/80 mm of Hg; PR was 96/min with saturation of 98% at room air.

### I.3 Investigation

All routine investigations were done. His WBC count was around 3850 cells/cumm, RBC Count was 4.8million/cumm, Platelet were around 1.9 lakhs, Haemoglobin 12.8 gm/dl. Urine analysis showed pus cells of 3-4/hpf, epithelial cells 1-2/hpf, no casts and crystals. His creatinine was 1.0 mg/dl, S. urea was 32. S. Electrolyte levels were normal. Sputum for AFB was negative. Thyroid function tests were also normal. HIV and Hbsag were negative. Ascitic fluid analysis showed no pus cells and no organisms in culture. Fluid for AFB was negative, Albumin was 3.4mg/dl, LDH 345U/L, Proteins 5.7 gm/dl, ADA 78.29 U/L and Total counts of 6440 cells/cumm with neutrophils 02% and Lymphocytes 98%.

### I.4 Radiology

His chest X-ray didn't show any obvious pathological features (Fig 3). USG Abdomen showed mild ascites with mild splenomegaly. A USG guided ascitic tapping was done and a straw-coloured fluid was obtained. Meanwhile CT abdomen was done, and it showed mild splenomegaly, terminal ileum under distended with possible mild wall thickening, mild splenomegaly and mild bilateral pleural effusion (Fig 1,2). Meanwhile his ascitic fluid analysis came back and it showed albumin of 3.4gm/dl, LDH 345U/L, Protein of 5.7gm/dl, ADA 78.29U/L, Total counts of 6440 cells/cumm which consisted predominantly of lymphocytes (98%). Thus, he was diagnosed as TB Abdomen



Fig 1. CT

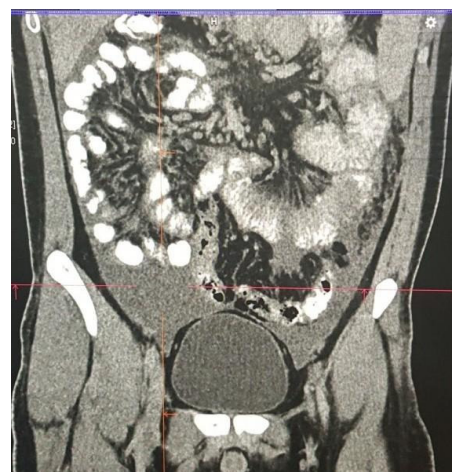
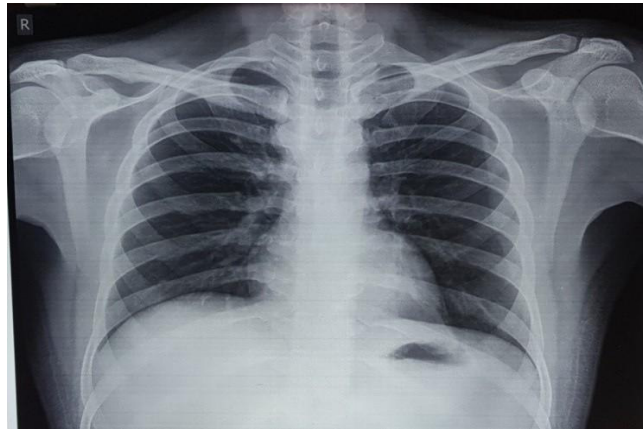


Fig 2. CT



**Fig 3. Chest Xray**

### 1.5 Management

The patient was managed with cough syrup, fluids and appetite stimulators. He was advised to take high fibre diet with plenty of fluids. Based on USG report a USG guided ascitic tapping was done and a straw-coloured fluid was obtained. CT Abdomen was done. Based on the above investigations he was started on anti-Tuberculosis Treatment and registered with the DOTS scheme. He improved symptomatically and was discharged at request.

### 1.6 Follow up

He was advised for regular follow up and to continue to meet the DOTS supervisor for the entire duration of treatment.

## 2. DISCUSSION

Gastric tuberculosis is mostly secondary to pulmonary tuberculosis. Primary and isolated gastric tuberculosis is very rare<sup>1</sup>. Abdominal tuberculosis (TB) is the sixth most common form of extra-pulmonary site of infection after lymphatic, genitourinary, bone and joint, miliary and meningeal TB<sup>2</sup>. Peritoneal TB is of 2 types a) Acute – mimics acute abdomen – due to perforation/ rupture of mesenteric lymph nodes b) Chronic: ascitic / encysted/ plastic/ purulent Ascites is defined as an abnormal accumulation of fluid in the peritoneal cavity, the presence of serous fluid between the visceral and parietal peritoneum. The word ascites was coined from the ancient Greek word “askos” which means a bag or a sack. Intense exudate causes ascites. It is common in children and young adults. When it has minimal fibroblastic reaction, ascites gets loculated and forms encysted form.<sup>3</sup> When it has excessive fibroblastic reaction, ascites gets loculated and forms plastic form with adhesions. Diagnostic techniques and procedures include a) Clinical observation b) Imaging techniques: ultrasound, CT/MRI c) Laboratory tests d) Ascites fluid microbiologic and biochemical analysis e) The tuberculin skin testing high specificity of this test which is between 95 and 99% f) IFN- $\gamma$ -based test with an 89% sensitivity. Presenting features are ascites, doughy abdomen, abdominal pain, fever. Ultrasonography may show Intra-abdominal fluid which may be free or loculated; and clear or complex. Thick septa may be present due to fluid collection and it may mimic ovarian cyst. Due to fluid collected locally between circumferentially arranged loops of bowel, club sandwich or sliced bread appearance may be seen. It is due to local exudation from the

inflammation. Sensitivity of direct microscopic smear detection of acid-fast bacilli in the ascitic fluid (0–6%) and ascitic fluid mycobacterial culture (20–35%) is low<sup>4</sup>. The ascitic fluid on computed tomography has high attenuation values, between 20 and 45 HU. Ultrasound is the investigation of choice as it is the most sensitive and reliable method for detecting ascites.<sup>5</sup> An Ascitic ADA level of 30 units/L had a sensitivity of 100% and specificity of 94.1% for tubercular peritonitis. Other tests, though not commonly done include Quantiferon-TB Gold (QFT-G), T-cell Based Testing for Mycobacterium Tuberculosis (ELISPOT), GeneXpert Assay. The 65-kDa HSP, 71-kDa HSP, 14-kDa HSP and Ag 85 complex proteins may serve, in future, as very useful diagnostic markers for TB ascites. Tuberculosis is one of the top 10 causes of death worldwide and the leading cause of death from a single infectious agent.<sup>6</sup> The excess accumulation of intra-peritoneal fluid, referred as ascites, is an important clue that points to a significant underlying illness. This may be due to a pathological event within the peritoneal cavity or secondary to an underlying systemic condition<sup>6</sup>. With timely diagnosis and treatment with first line antibiotics for 6 months most of the infected people got cured. 58 million lives were saved through effective diagnosis and treatment, 2000-2018<sup>7</sup>. The estimated TB incidence in India is 27lakh. In 2018, RNTCP was able to achieve a notification of 21.5 Lakh. This is a 16% increase as compared to 2017 and the highest so far<sup>8</sup>. Abdomen is involved in 11% of patients with extra-pulmonary tuberculosis; The most common site of involvement is the ileocecal region, other locations of Involvement, in order of descending frequency, are the ascending colon, jejunum, appendix, duodenum, stomach, oesophagus, sigmoid colon, and rectum<sup>9</sup>. Early diagnosis and initiation of antituberculous therapy and surgical treatment are essential to prevent morbidity and mortality. Most of the patients respond very well to standard antitubercular therapy and surgery is required only in a minority of cases<sup>10</sup>. Despite the strong association of HIV infection with extrapulmonary tuberculosis (EPTB), the effect of ART on the epidemiology of EPTB remains undocumented<sup>11</sup>. TB peritonitis is reported to occur in certain high-risk populations which include patients with AIDS or cirrhosis, patients on continuous ambulatory peritoneal dialysis<sup>12</sup>. Extrapulmonary involvement can occur in isolation or along with a pulmonary focus as in the case of patients with disseminated tuberculosis (TB)<sup>13</sup>. Contrary to the increasing number of TB cases in developing countries, the number of cases in industrialized countries is stable or decreasing<sup>14</sup>. Early and proper treatment of tuberculosis

could have an important impact on the morbidity, mortality and the economic situation of patients<sup>15</sup>. Individuals infected with *Mycobacterium tuberculosis* (Mtb) may develop symptoms and signs of disease (tuberculosis disease) or may have no clinical evidence of disease (latent tuberculosis infection [LTBI]). Tuberculosis disease is a leading cause of infectious disease morbidity and mortality worldwide, yet many questions related to its diagnosis remain<sup>16</sup>.

### 3. CONCLUSION

In 2018, India was able to achieve a Total Notification of 21.5 Lakh TB cases of which 25 % was from the private sector. Majority of the TB burden is among the working age group. The 89% of TB cases come from the age group of 15-69 years. About 2/3 of the TB cases are Males. The above-mentioned data is as per national records. Although a lot of effort is being put into controlling this disease but looking at

the burden even more is required. Tuberculosis being a big burden to our country should not be missed. It is treatable and so every case should be diagnosed and started on treatment. The work doesn't end here as the patient must be followed further as any discontinuation or not taking it on time can result in an even bigger epidemic-Drug Resistance.

### 4. AUTHORS CONTRIBUTION STATEMENT

Dr B Abhilash Nair and Dr Muruguraj gathered the data and other relevant information. Dr V Padma analysed and guided the above-mentioned authors in every step. All authors discussed the case report and contributed to the final manuscript.

### 5. CONFLICT OF INTEREST

Conflict of interest declared none.

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