

A CASE REPORT OF ABDOMINAL TUBERCULOSIS

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ABSTRACT: We report a case of 24yr old female who presented with fever, cough with expectoration, decreased appetite, nausea, vomiting, and distension of abdomen with pain in abdomen, ascitic fluid protein was 5 g% , serum-ascites albumin gradient (SAAG) was 0.9 g% , adenine deaminase (ADA) was 39 and serum CA 125 was 194.1 U/ml. Chest X ray showed blunt left costophrenic angle with left hilar prominence with calcification .Abdominal ultasonography revealed right tubo-ovarian mass with gross ascitis. CECT Abdomen showed huge pelvic and abdominal cystic lesion with small nodule arising from right adnexa. The patient was started on DOTS regimen under category- 1 and supportive treatment. M. tuberculosis complex was detected in TB PCR (ascitic fluid) report . Patient reported for follow up and showed marked improvement with regression of ascites and improved general condition.

Key Words: Abdominal tuberculosis, Ascitis, Serum-Ascites Albumin Gradient.

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INTRODUCTION: Gastrointestinal tract is one of the most frequent sites of extra-pulmonary involvement of tuberculosis. Patient may present with some atypical presenting symptoms which can mimic abdominal malignancy.

There is a significant role of serum ascitic albumin gradient in diagnosing abdominal tuberculosis but elevated CA125 does not signify malignancy as a rule, when elevated.

CASE REPORT: A 24 yr old female presented with chief complaints of fever, cough with expectoration, and decreased appetite since one month. She reported frequent episodes of nausea and vomiting, distension of abdomen with pain in abdomen and oral ulcers since eight days. Fever was low grade, intermittent, associated with chills and used to subside on taking medication (antipyretics). There was cough associated with yellowish mucoid expectoration, not associated with blood, not foul smelling and 20-30 ml in amount. Cough increased during cold weather, and on exposure to dust and smoke. No postural or diurnal variation was found. There was nausea and vomiting since 8 days. Vomitus contained food particles. She took some treatment for this and developed oral ulcers,

which were probably drug induced. But pain and distension of abdomen were continued. Past and Personal history were insignificant. There was no family history of diabetes, tuberculosis, hypertension or asthma. Menstrual history was unremarkable. She gave obstetric history of full term normal delivery two years back.

On examination patient was afebrile with normal pulse and blood pressure. On auscultation air entry was diminished on left side. Cardiovascular examination was unremarkable. On examination, abdomen was distended with everted umbilicus. Abdomen was tender with no organomegaly and no any palpable lump. Shifting dullness and fluid thrill were present. As per gynaecological examination, cervix was smooth with foniceal fullness. A nodular mass could be palpated per rectally.

Investigations: On examination, Hb-10.9 gm %, RBC-4.74 /cmm ,TLC-9100 /cmm (75/20/1/4/0), ESR-22 mmHg at the end of first hour, PS- RBC are mild microcytic hypochromic .Urine examination was normal. On examination of Ascitic fluid , appearance -clear ,colour – Yellow ,Deposit – Nil ,Sugar-61mg% ,Proteins-5gm% ,Albumin-2.1 ,Total cells-150/cmm { N-5%,

L-95%, RBC-400 } , AFB stain – Negative ,Gram Stain - No microorganism seen, Cytology lymphocytes + occasional mesothelial cells in proteinacious background. SGOT-44 IU/L, SGPT-26 IU/L, S. bilirubin-0.35mg/dl (0.1/0.25), Blood urea-19mg/dl, S. creatinine-0.7 mg/dl, T3-1.33 ng/ml, T4-12.63mcg/dl, TSH-1.27 IU/ml, MT – positive, HIV and HBsAg –ve , RBS- 80mg% , Blood group- B+ve .

ECG shows normal sinus rhythm while PAP smear showed inflammatory smear. On Body fluid marker examination- S. proteins-6.41gm/dl, Albumin -3gm% , Ascitic fluid Proteins-5gm% , Albumin-2.1 ,SAAG – 0.9 gm% , ADA- 39, Serum CA 125 - 194.1 U/ml. Chest X ray showed left costophrenic angle blunt with left hilar prominence with calcification as depicted in fig-1.Ultrasonographic examination revealed right tubo ovarian mass with gross ascites and a suspected right adnexal mass.

On CECT Abdomen, huge pelvic and abdominal cystic lesion with small nodule arising from right adnexa was reported.

CECT Lung showed patchy infiltration in lateral segment of middle lobe, left minimal pleural effusion with underlying passive lung collapse.

The patient was transferred to respiratory medicine side and was started on DOTS regime under category- 1 and supportive treatment on the basis of following points:

1. History of fever, cough and decreased appetite.
2. Ascitic fluid was exudative with raised lymphocytes.
3. Ascitic fluid ADA is 39.
4. CXR shows left hilar prominence with calcification.
5. TB PCR (ascitic fluid) report was then received which detected M. tuberculosis complex .Patient reported for follow up and showed marked improvement with regression of ascites and improved general condition.

DISCUSSION: Though tuberculosis can involve any part of human body but gastrointestinal tract is reported as the sixth most frequent site of extrapulmonary involvement. Bacteria causing tuberculosis of the gastrointestinal tract may disseminate via ingestion of infected sputum, haematogenous spread or direct spread from infected contiguous lymph nodes and fallopian tubes.^[1]Presentation of abdominal

tuberculosis is often variable and non specific findings may mimic other rare diseases and even malignancies.^{[2][3]}

Abdominal tuberculosis can be defined as infection of the peritoneum, hollow, or solid abdominal organ with mycobacterium tuberculin. Primary peritoneal carcinoma is one of the differential diagnosis of the abdominal tuberculosis as both has common presenting features of abdominal mass, ascites with elevated CA125.^[4] There is a significant role of serum ascitic- albumin gradient in the diagnosis of abdominal tuberculosis. It is a useful marker of ascites with a diagnostic efficacy of 96%.^[5] Not only SAAG but LDH > 90 U/L is useful in the screening of abdominal tuberculosis but it is best confirmed by laparoscopy with peritoneal biopsy and M tuberculosis culture.^[6]

Figure 1: Chest x- ray



Chest X ray showing left costophrenic angle blunt with left hilar prominence with calcification

CONCLUSION: The negative predictive value of ADA for the diagnosis of non-tuberculous etiology was 97.5%. CA 125 should not always be interpreted as malignancy if raised.

List of abbreviations:

- ❖ DOTS- Directly Observed Treatment Short course
- ❖ SAAG-serum-ascites albumin gradient
- ❖ ADA- adenine deaminase
- ❖ CA 125- carcinoma antigen 125
- ❖ CECT- contrast enhanced computed tomography
- ❖ CXR- chest x- ray
- ❖ LDH- lactate dehydrogenase
- ❖ PCR- polymerase chain reaction

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