Case Report

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# Diverse Presentations of Tuberculous peritonitis, Case Series, 2025

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## ABSTRACT

*A 24 years nuliparous mother presented with primary infertility and had no history or symptom complex of tubeclosis. MRI revealed adenexial cyst and HSG indicated blocked tubes with well formed uterine cavity and laparatomy revealed severe adhession with encapsulated thick peritonum, mimics ovarian cyst. The second case was a multigravid mother presented with acute abdomen and ultrasound revealed massive pelvic abcess and laparatomy showed 2.5 litre of pelvic abcess with tubercular peritoneal seeding. The third case was a multigravid mother with abdominal pain, vomithig and weight loss of 3 monthes and MRI revealed abdominal-pelvic mass with ascites and laparatomy revealed severe adhesion with asictes and tubercular peritonial seeding. The fourth case was multiparus mother with ascites and abdominal distention. Intraoperatively, there was massive peritoneal and omental seeding. Histopathology confirmed the diagnosis of tuberclosis peritonities in all cases and they started antitubeclosis treatment and put on follow up.*

## Keywords

Tuberclosis peritonities, Antituberculosis, Peritonial seeding.

## Introduction

Peritoneal tuberculosis is an infrequent clinical condition and the scarcity of peritoneal tuberculosis cases underscores the necessity for heightened vigilance within clinical settings to detect its presence [1]. Peritoneum is a rare site for tuberculosis (TB) with broad unspecific symptoms. It can be asymptomatic to periodic signs or mimic the positive peritonitis examinations [1,2]. Although TB is a major health problem worldwide, primary extra pulmonary tuberculosis (EPTB), remains a rare event [3].

Tuberculous peritonitis ranges from 0.1 to 0.7 % of all tuberculosis cases and is described in three different types as “wet ascetic”, “fibrotic fixed” and “dry plastic” [1,2]. In one case laparoscopy showed ascites and multiple small yellowish-white nodules on both the liver and the visceral and parietal peritoneum with a typical “millet seed” appearance, fibrous translucent called “curtain lace-like” adhesions and adhesions with “violin string” appearance [4]. Another case presented with vague symptoms of abdominal pain, weight loss, and fatigue, with imaging studies revealed a pelvic mass, later found to be pelvic tuberculosis [5]. The diagnostic approach was difficult, since all investigations pointed strongly to a malignancy, from clinical, imaging, laboratory (elevated CA-125), and even macroscopic findings at laparotomy [5].

The presentation of pelvic tuberculosis as an isolated ovarian abscess is extremely rare and one case presented with abdominal pain, pelvic mass and fever [6]. Intra-operatively, isolated right ovarian mass with caseation in the cavity but no significant pelvic adhesions were detected. It usually presents with adnexal mass and can mimic ovarian tumor [6]. The diagnosis of tuberculous peritonitis is often delayed on account of non-specific clinical

symptoms. The absence of specific biological markers, long incubation times for cultures and nonspecific radiographic or ultra-sonographic signs increase the morbidity associated with this treatable condition [7]. One case indicated diagnostic laparoscopy revealed a miliary pattern comprising the parietal and pelvic peritoneum, uterus, fallopian tubes, and major omentum suggestive of peritoneal tuberculosis [8].

Peritoneal tuberculosis is a disease which can mimic advanced ovarian cancer and peritoneal carcinomatosis especially in women who present with ascites and elevated CA125 levels [9]. It should always be considered in differential diagnosis, but the diagnosis is rarely easy for clinicians [9]. True diagnosis and then correct and careful follow-up can save the patient's life [9]. Early diagnosis and prompt treatment with percutaneous drainage guided by ultrasound along with anti-tuberculous drugs, lead to a satisfactory outcome [10,11]. In this case it was discovered the infection only intra-operatively while attempting fixation of the symphyseal disarticulation [12]. Here we report different cases of tuberculosis peritonitis with different clinical scenarios.

## Case Reports

The first case was a 24 years old nuliparous patient presented with primary infertility of 3 years and reccurent abdominal pain for 4 months. She had no personal or family history and any symptom complex of tubeclosis. She had regular menses and her hormone analysis and CXR was unremarkable. Transabdominal ultrasound and MRI revealed big adenexial cyst and hysterosalpingography indicated blocked tubes with well formed endometrial cavity. Laparatomy revealed severe adhessions and the peritonium was thick that encapsulated the ascites which mimics adenexial cyst (Figure 1a-c). There was multiple fibrious tissue and exploring the abdomen and identifing the pelvic organs (uterus and ovaries) were difficult. Sample was sent for hystopathology which revealed tuberclosis peritonities and she started on antitubeclosis treatment and put on follow up for her infertility concern.

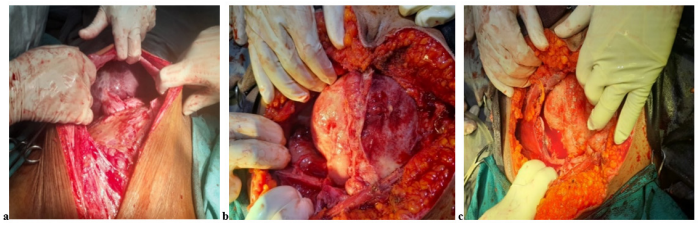

**Figure 1**

The second case was a 36 years multigravid mother, presented with abdominal pain, nausia and generalized body weakness for 10 days. She was initially refered from othe Community Hospital to Orotta National Referral Surgical Emergency with the asesment of acute abdomen. She had no fever, diarhea or vomiting and her menses was before 2 weeks. She was investigated with transabdominal ultrasound which revealed pelvic abcess. With the assesment of acute abdomen complicated with pelvic abcess, laparatomy discovered a 2.5 litre of foul smelling pus which was evacuated from the peritonium (Figure 2a, b) The abdomen was explored to determine the cause of the pelvic abcess and the apendix and pelvic organs were normal except the superficial inflamatory process (Figure 2c) Furthermore, there was multiple peritonial seeding and thickening in the omentum (Figure 2d) Sample was sent for hystopathology analysis that revealed tuberclosis peritonities. She was discharged after one week hospital stay and started on anti-tuberclosis treatment.

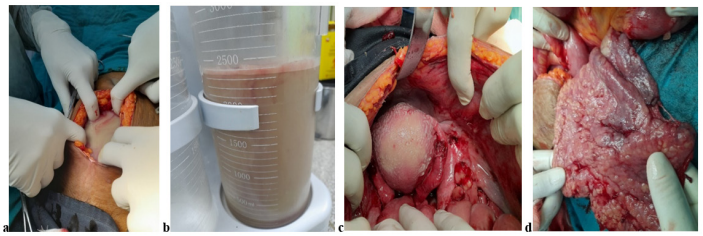

**Figure 2**

The third case was a 29-year-old para 1 mother presented with abdominal pain, vomiting, weight loss of 03 weeks. She had no contact history with TB patients or history of previous tuberculosis treatment. Peritoneal fluid cytology analysis revealed active inflammatory process and MRI indicated complex adnexal and abdominal mass. She was counseled for explorative laparotomy and intra-operatively multiple adhesions of the intestine with tubercular seeding was identified (Figure 3a, b). The omentum was very thick which encapsules ascetic fluids which resembles abdominal-pelvic mass. Sample was taken from the omentum and showed tuberculosis peritonitis. She was clinically deteriorated and died after 1 week of hospital stay.

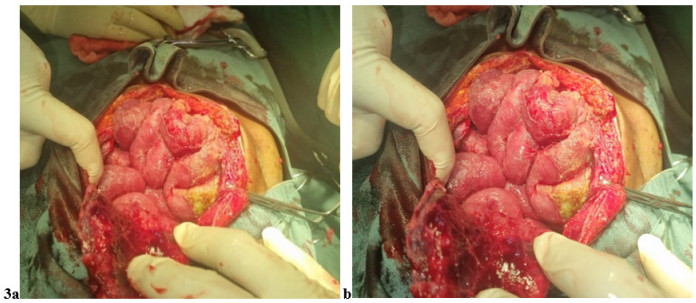

**Figure 3**

The fourth case was a 42-year multiparous woman presented with abdominal distention, pain and ascites of 4 months. On physical examination, abdomen was tense with positive shifting dullness. Ascitic fluid analysis revealed inflammatory process and MRI of the pelvis indicated bilateral adnexal mass. Intraoperatively, there was massive peritoneal and omental seeding and there was not any adnexal mass (Figure 4a-c). Total abdominal hysterectomy and bilateral salpingo-oophorectomy was done. Tissue was sent for histopathology analysis, which revealed granulomatous lesion, suggestive of tuberculosis and patient started on anti-tuberculosis treatment.

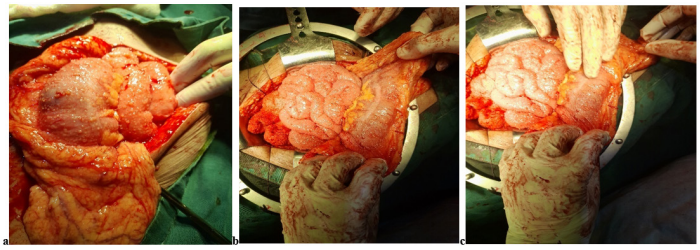

**Figure 4**

## Discussion

Peritoneal tuberculosis is a rare and may present with different clinical scenarios, and high index of suspicion is important especially in developing countries with higher prevalence of tuberculosis. Tuberculous peritonitis ranges from 0.1 to 0.7 % of all tuberculosis cases [4,13]. A case report indicated that peritoneal tuberculosis is an infrequent clinical condition with broad unspecific symptoms [1]. The clinical presentation of two cases were atypical which mimics ovarian cyst, dense adhesion and pelvic abscess. This was consistent with a case report that the patient's primary diagnosis of tuberculosis peritonitis complicating an intraperitoneal tuberculous abscess [2]. Another reported that ultrasonography of the abdomen showed massive ascites with multiple septa and presented with pelvic mass [6,7]. Thus, clinical suspicion of tuberculosis peritonitis in patients with pelvic abscess or ascites is crucial to prevent the anticipated complications.

All cases had no previous history or contact with patients who had tuberculosis. They presented with vague abdominal pain, pelvic abscess and ascites. Similarly, other studies indicated that the patient had abdominal pain, vomiting, ascites [6,7] and acute abdominal pain [13]. Therefore, patients may present with acute abdomen and mimics other surgical conditions. In all cases, there was peritoneal seeding of tubercular bacilli. This was comparable to other case report that the peritoneum exhibiting widespread nodularity, disseminated seeding pattern [1] and military pattern comprising the parietal and pelvic peritoneum and major omentum [8]. This case reported ascites and multiple small yellowish-white nodules on the visceral and parietal peritoneum with a typical “millet seed” appearance, and fibrous adhesions [4].

The dense and thick peritoneum can encapsulate the ascites and can misdiagnosed as ovarian cyst, and the early presentation of ascites or pelvic abscess can mimic perforated appendicitis. Similarly, one case reported that it can usually present with adnexal mass and can mimic ovarian tumor [6]. Besides, peritoneal tuberculosis can often mimic advanced ovarian cancer and [9] often it is mistaken for ovarian malignancy [13]. Histopathology confirmed the diagnosis, and they started on anti-tuberculosis treatment. The diagnosis of tuberculous peritonitis is often delayed on account of non-specific clinical symptoms [7]. The clinical manifestations may be unspecific or inconclusive, requiring peritoneal biopsy and empirical treatment before definitive confirmation [8].

## Conclusion

Peritoneal tuberculosis is a rare condition with challenging diagnosis which can present with different clinical scenarios, and tubercular ascites when encysted mimics ovarian cyst. This can be diagnosed with high index of suspicion, laparoscopic based biopsy and prompt recognition and treatment are vital for better outcomes.

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