

# Tuberculous Peritonitis with Perforation - Case Reports.

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## Introduction

Tuberculous peritonitis is a diagnostic dilemma in that there is no available diagnostic method of confirming the diagnosis other than a diagnostic laparotomy. When a perforation develops the events are more dramatic and will usually lead to the diagnosis. On the other hand managing a perforation secondary to Tb peritonitis is a tedious and risky process in that controlling tuberculosis takes a long time and most of the readily available drugs for its treatment are in the oral form. The minimum period for treatment to be able to close a perforation is in the range of 6 to 8 weeks. In areas where parenteral nutrition is not affordable this becomes more of an impossible task. The purpose of this presentation is to highlight the difficulties encountered in the management of these patients as there is no literature that I have come across that discusses this kind of situation.

## Case reports

### Case 1

A 29-year-old male presented with 4 weeks history of general malaise, abdominal pains, occasional vomiting and sudden abdominal distention accompanied by severe abdominal pains and dysuria. On physical examination he was found to be fully conscious with a temperature of 38.6° Celsius and a pulse of 120/min. The chest was clear. Per abdomen, he had mild epigastric tenderness a palpable tender sub-umbilical cystic mass. Urgent haemoglobin was 9.4g/dl. Abdominal U/S showed a huge cystic mass extending from just below the umbilicus to the pelvis but anterior to the bladder. At laparotomy a huge abscess with fecal contamination was found and drained. Further inspection revealed a perforation and caseating granulomatosis. A biopsy was taken. The abscess cavity was left open as a laparotomy and was cleaned on daily basis. Histology revealed tuberculous peritonitis.

The patient was started on anti TB treatment with I.M. streptomycin 1g per day and Thiazina. Treatment was continued for two weeks together with dressings at the fistula site at which point closure of the fistula was attempted but broke down after five days. Treatment was continued for another four weeks when closure of the fistula was successful. Thereafter the patient had a quick recovery.

### Case 2

A 45-year-old male was admitted with a two-days history of severe abdominal pains and vomiting. He reported that for the previous three weeks he had been unwell with mild abdominal pains, occasional vomiting, excessive sweating and loss of appetite.

Clinical examination revealed a man in severe abdominal pain preferring to lie still. He had a temperature of 38.2° C, clinically not pale but was moderately dehydrated. Per abdomen there was distention, marked tenderness with rebound tenderness. Bowel sounds were decreased. A diagnosis of peritonitis was made.

His haemoglobin level was 10.2.g/dl. He was rehydrated prior to surgery. At laparotomy he was found to have three perforations in mid Jejunum and proximal ileum and severe faecal contamination of the abdominal cavity. Peritoneal toilet was done after which the perforations were closed. Five days later there was leakage of gas through the abdominal incision.

At repeat laparotomy, it was found that the two proximal perforations had broken down and there was a well-defined cavity around the perforations. The abdomen was left open for daily dressing.

A diagnosis of tuberculous peritonitis was confirmed on histology. The patient was put on treatment with ciprofloxacin and streptomycin as well as parenteral nutrition. This was continued for six weeks when the fistulae were successfully closed and the patient recovered fully thereafter.

### Case 3

A 35-year-old male who had appendicectomy one week previously developed abdominal pains and distention before discharge. On examination he was found to have rebound tenderness and decreased bowel sounds.

A midline laparotomy was done and found features of tuberculous peritonitis and a leakage from the appendicectomy site. The original appendicectomy incision was opened up to create a fistula. The rest of the abdomen was closed. The patient started on treatment for Tb orally. He died three days later.

#### **Case 4**

A 24-year-old male presented with a three weeks history of abdominal pains, loss of appetite, occasional vomiting. Clinical examination revealed moderate wasting, a temperature of 37.8°C, mild pallor and tender para-umbilical mass. Ultrasound scan revealed a cystic abdominal mass.

At laparotomy a large confined abscess was drained which was found containing faecal material. A small perforation and caseating granulomas were also identified. Biopsy taken for histology confirmed presence of tuberculosis. The cavity was cleaned, packed and left open. The patient was started on anti-Tb treatment and daily dressing of the cavity. Oral feeding was continued as the fistula was draining less than 500ml per day. After about six weeks the patient recovered fully with the fistula and abdominal incision closing spontaneously without further surgery.

#### **Case 5**

A 20 year old female college student had been unwell for about two months when she was admitted. She had been to several health institutions where she had been treated for various illnesses including typhoid and peptic ulcer disease. At the time of presentation she also complained of gross abdominal distension, vomiting for the previous two days, abdominal pains and constipation.

Examination revealed a sick looking young patient with gross abdominal distention.

At laparotomy there was ascites and small bowel obstruction at the level of the terminal ileum from inflammatory adhesion secondary to Tb peritonitis. The adhesions were released and intestinal flow re-established. Biopsy of the peritoneum confirmed Tb.

The Mantoux test was negative. She started feeding on the second post-op day and was also started on oral Tb drugs. Seven days after the laparotomy she started oozing fecal material from the incision site. A repeat laparotomy was done and distention and moderate tenderness. There was also ascites and decreased bowel sounds. A provisional diagnosis of Tb peritonitis was made and a Mantoux test requested.

Plain abdominal x-ray revealed distended loops of small bowel with air/fluid levels. Abdominal ultrasound scan revealed ascites and distended loops of bowel. It was found that she had developed a perforation at the site of adhesions release. The terminal ileum was brought out as an ileostomy; the abdomen cleaned and closed leaving the skin open. Anti-Tuberculous drugs were continued and oral feeding was resumed after three days. The abdominal skin wound was closed after one week and the patient was discharged after 14 days with the ileostomy. She recovered progressively thereafter and the ileostomy was closed after another 4 weeks. She eventually recovered fully after treatment for Tb.

#### **Discussion**

Diagnosing tuberculous peritonitis is usually very difficult as there are no specific symptoms and signs. Most patients will present with vague complaints of abdominal pains, there may be occasional vomiting, low-grade fever, ascites, and loss of appetite and possibly weight loss.

The true features of acute peritonitis will only be evident after there is a perforation. As such a high degree of suspicion and possibly a diagnostic laparotomy is usually necessary to confirm the diagnosis. In those patients where a diagnosis can not be made, it would do less harm to do a diagnostic laparotomy. As has happened to the cases presented the diagnosis was late and thus the complications. When the complication of perforation occurs then the management of the patient becomes more complicated as most of the recommended drugs are only available in the oral form. On the other hand the treatment takes a long time before the friability of the intestines subsides to allow resection and repair of the perforation. In these case reports it took an average of 6 weeks for the inflammation to settle down to allow for closure of the perforation / fistula. This could have been avoided by early diagnostic laparotomy.

#### **Recommendation**

If there is a patient with the above signs mentioned in the case reports in situations where a diagnostic laparoscopy cannot be done, a diagnostic laparotomy is recommended.