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# A CASE REPORT: RARE PRESENTATION OF ENTERO-VESICAL FISTULA IN ABDOMINAL TUBERCULOSIS

General Surgery

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## ABSTRACT

Abdominal tuberculosis is one of the common presentations of tuberculosis. It can manifest with various complications. However, spontaneous development of enterovesical fistula especially in association with colovesical and enterocutaneous fistulae is extremely rare in the era of highly effective Antituberculosis Treatment (ATT). This particular situation poses a management difficulty. Although initial treatment includes medical management, these patients may require some sort of surgical redivision and reconstruction. Here, we report the case of a 65-year-old male patient who presented with recurrence of intestinal TB with spontaneous complex ileovesical fistulae. The diagnosis was established with help of investigations including, Contrast Enhanced Computed Tomography (CECT) of the abdomen with fistulogram and cystoscopy. This unusual complex fistula was successfully managed by staged surgical procedure along with ATT.

## KEYWORDS

### CASE REPORT

A 65-year-old male patient presented to the Department of General Surgery, smimer hospital with intermittent episodes of fever, lower abdominal pain and retention of urine since 2 days colicky type of abdominal pain. After inserting Foley's catheter 1200 ml dirty urine drain. Within12 hour Patient Foley's blocked on removing Foley's catheter patient passed food particles per urethrally(Fig1). There was a history of decreased appetite and weight loss (unquantified). On clinical examination, the patient was poorly nourished with abdomen is soft and no any sign of acute abdomen On evaluation, ultrasonography abdomen showed marked ileitis, and changes of cystitis with mild ascites. CECT abdomen demonstrated marked irregular wall thickening of ileum loop, ileocaecal junction, with surrounding mesenteric fat stranding and it show fistulous tract with adjacent ileal loops with minimal ilterloop free fluid. Fistulous track between thickened ileal loop and dome of urinary bladder (Fig2)with multiple air pockets in urinary bladder ascites and without any peritoneal leak of contract from bowel. Chest X-ray was unremarkable. Blood tests showed haemoglobin of 9.2 gm/dL with lymphocyte predominate leucocytosis, erythrocyte sedimentation rate was 110mm/hr and serum ADA was 51.2 units/L. The ascitic fluid analysis was an exudative picture with lymphocyte predominance and fluid Adenosine Deaminase (ADA) level was 55.2 IU/L. With this background, the patient was diagnosed to have intestinal Tuberculosis (TB) and patient is treated with ATT and patient operated for surgical resection of fistula with bowel resection(Fig3) and anastomosis and urinary bladder primary closure with continuation ATT in post operative period for 9 months.

Histopathological examination of the lesion revealed epithelioid cell granuloma and giant cells, confirm the diagnosis of intestinal tuberculosis.

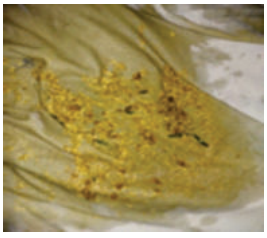

**Fig.1 urine contains food particles**

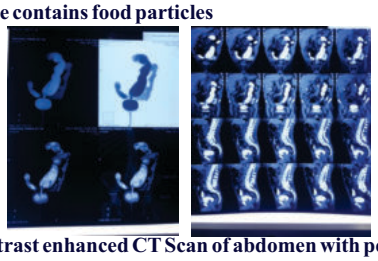

**Fig 2. Contrast enhanced CT Scan of abdomen with pelvis**

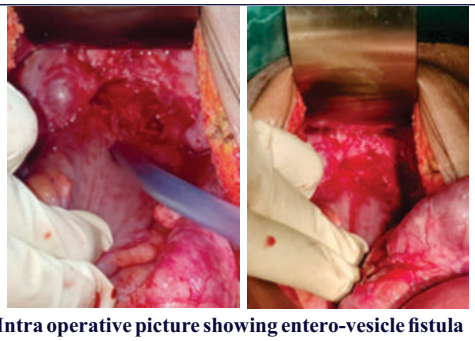

**Fig 3. Intra operative picture showing entero-vesicle fistula**

### DISCUSSION

Tuberculosis of intestine is the sixth most common site of extra pulmonary tuberculosis. The frequent site of involvement in bowel is the ileocaecal region, probably related to increased lymphoid tissue and stasis. It usually manifests with various complications such as intestinal obstruction, perforation, bleeding and very rarely enterocutaneous fistula (2.5%) [1,2]. An ileovesical fistula is a rare complication secondary to Crohn's disease, diverticulitis, appendicitis and non-Hodgkin's lymphoma. However, tuberculosis is a rare cause of ileovesical fistula [3]. Colovesical fistula is the most common form of the enterovesical fistulae and occurs mostly due to diverticular disease (70-90%), colorectal malignancy (20%) or Crohn's disease (10%) and rarely due to infections like typhoid fever, amoebiasis, syphilis, tuberculosis [2]. Moreover, simultaneous presentation of complex ileovesical, colovesical and entero-cutaneous fistula is an extremely rare situation which was present in this case.

Pathophysiology behind TB enterovesical fistula is transmural inflammation of bowel causing adherence to adjacent bladder with subsequent erosion and fistula formation. The other mechanism is penetrating ulceration of diseased bowel resulting in contained perforation and formation of an abscess. When abscess necessitates into adjacent viscus (e.g., urinary bladder) or through a cutaneous wound it leads to fistula formation. Although most of the enterovesical fistulae are a result of underlying intestinal disease, predominate manifestations are urological [3]. This is probably related to high bladder compliance and low pressure in the bladder. Therefore, these patients manifest with pneumaturia and fecaluria (50 to 90%) than the flow of urine into the bowel (15%) [4]. Similar presentation was observed in the present patient. Diagnosis of enterovesical fistula is suspected based on clinical manifestation and further confirmed by CECT scan, colonoscopy with ileoscopy, cystoscopy, and barium study. CECT is the most sensitive investigation to diagnose enterovesical fistula. It may show bowel and bladder wall thickening, minimal extraluminal gas and contrast [5]. However, in the present patient, clubbed CECT abdomen with fistulogram clearly demonstrated fistula and its associated communications.

Initial management is done usually by medical treatment including ATT. Surgical management, if a fistula is not healing with ATT. Resection of the diseased bowel and primary repair of the bladder with catheter drainage usually suffice [7]. Similarly, our patient had undergone resection of fistulous tract with bowel anastomosis and urinary bladder wall repair with post operative continue ATT.

## CONCLUSION

Complex ileovesical fistula is an extremely rare complication of TB intestine. However, one should suspect this diagnosis in a known case of TB intestine presenting with typical manifestations. Although, ATT is effective in alleviating some of the symptoms and overall improvement, these patients may require surgical resection of the underlying diseased bowel.

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