

Tuberculous Ileo-Vesical Fistula; A Rare Case Report

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ABSTRACT

Intestinal tuberculosis is one of the common type of extra pulmonary tuberculosis. Spontaneous development of enterovesical fistula is extremely rare in the era of highly effective antituberculous treatment (ATT). These patients usually require some sort of surgical resection and reconstruction followed by ATT. Here, we report a case of a 40-year-old male patient who presented with spontaneous ileo-vesical fistulae. The diagnosis was established with abdominal & pelvic ultrasound, Contrast Enhanced Computed Tomography (CECT) of the abdomen and Barium meal and follow through study. Cystoscopy was permed to confirm communication and rule out any other bladder pathology. This unusual fistula was successfully managed by resection of involved ileum, closure of bladder followed by ATT with successful outcome.

Keywords: PMC, FMU, AHF.

INTRODUCTION

Ileo-vesical fistula is a relatively uncommon complication of Crohn's disease, appendiceal diverticulitis, Meckel's diverticulum, non-Hodgkin's lymphoma and tuberculosis of the terminal ileum.^{1,2} Although Crohn's disease is commoner in western literature, however in third world countries like Pakistan, tuberculosis (TB) is the major cause of ileal strictures, perforation and fistula formation. The symptoms of cystitis, painful micturition, terminal pneumaturia and faecaluria are pathognomic of enterovesical fistula.³

The fistula is supposed to be initiated by transmural tuberculous inflammation of ileal loop with subsequent perforation and extramural abscess formation. Adjacent bladder wall is involved resulting in ileo-vesical fistula formation. History of pulmonary TB and positive family history raises suspicion of intestinal involvement and fistula formation. Ultrasonography (USG), Contrast Enhanced Computed Tomography (CECT) and barium studies are usually employed to confirm presence of fistulous communication between bladder and segment of intestinal tract. Diagnosis of TB is confirmed by histopathology. Most of the cases are treated by surgical

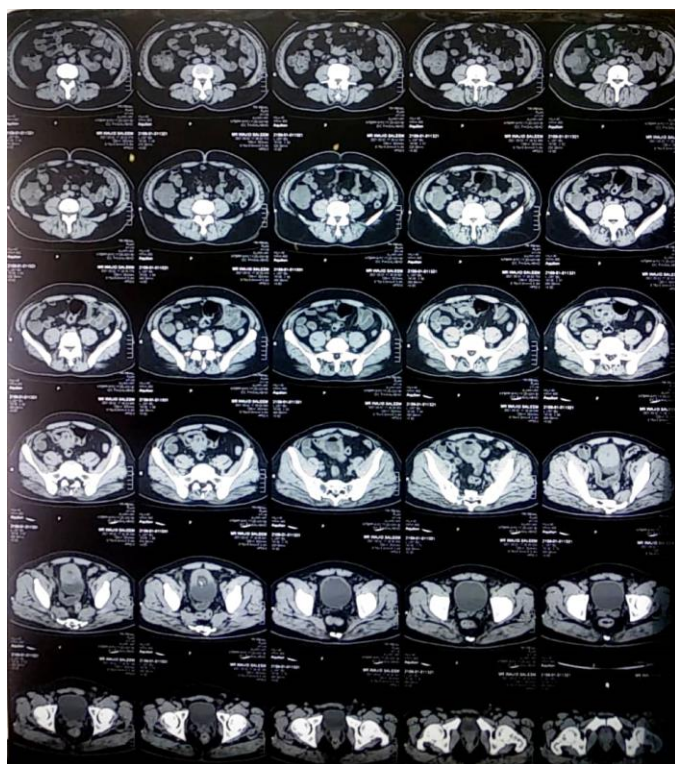
separation of intestine from bladder along with ATT. Occasional cases of conservative management of vesico intestinal fistula with ATT alone has been reported in literature.^{3,4} We hereby present a rare case of successful management of ileo-vesical tuberculous fistula by a combination of surgery and ATT

CASE

A 40 year otherwise healthy male with no comorbid factor, presented with painful micturition, pyuria and painful passage of "whitish clots" in urine. Patients gives history of loose stools with increased frequency and off and on low grade fever. There was no history of weight loss, cough, any trauma or Surgery in recent past. Family history of TB was positive. Vitals were within normal limits, and systemic examination was unremarkable. Urine analysis showed numerous pus cells, RBCs, mucosal threads and no bile. USG KUB showed mild hydro along with a pouch superior to dome, suspicious of diverticulum. (Fig 1)

Figure 1: Ultrasound showing bladder communication

CT abdomen showed vesico enteric fistula probably of ileum. (Fig 2) To establish its exact site and rule out any other abnormality in intestinal tract, we performed barium meal and follow through which showed leakage of contrast from distal ileum to bladder and passing through large GUT showing no other abnormality. (Fig 3)

Figure 2: CECT showing communication between bowel and bladder

We did explorative laparotomy, distal ileum 10cm proximal to ileocaecal junction was involved. Ileum and bladder were separated. Involved ileum about 6cm was resected and end to end anastomosis was performed along with bladder closure & catheter drainage. Biopsy was sent for Histopathology. Postoperative recovery was eventless with resumption of bowel movements on 4th

day. Tuberculosis was confirmed on histopathology and ATT was started for 06 months. Patient was followed up till the completion of ATT with satisfactory outcome.

Figure 3: Barium studies showing fistulous communication between bowel and ileum

DISCUSSION

Tuberculosis of intestine is the sixth most common site of extrapulmonary tuberculosis. The frequent site of involvement in bowel is the ileocaecal region. 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 very rare complication of Crohn's disease, diverticulitis, appendicitis, non-Hodgkin's lymphoma and tuberculosis particularly in underdeveloped and developing countries.³

Patients most oftenly present with urological symptoms like frequency, urgency, dysuria and hematuria, associated with abdominal pain, diarrhea, constipation, intestinal obstruction. Pneumaturia and fecaluria, passage of gas and feces per urethra are the most pathognomonic manifestations of enterovesical fistula. The flow through the fistula predominantly occurs from the bowel to the bladder. This is probably related to high bladder compliance and low pressure in the bladder. (1)

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. This abscess may burst into adjacent viscus (e.g., urinary bladder) or through a cutaneous wound it leads to fistula formation.

Diagnosis of enterovesical fistula is confirmed by CECT, colonoscopy with ileoscopy, cystoscopy, and barium study. CECT scan is the most sensitive investigation to diagnose enterovesical fistula. It may show bowel and bladder wall thickening, minimal extraluminal gas and contrast.^{4,5} Cystoscopy is the useful to confirm the diagnosis and to rule out any other urinary bladder pathology or malignancy.⁶

Resection of the diseased bowel and primary repair of the bladder with catheter drainage followed by ATT is the most commonly reported treatment modality for ileovesical fistula.⁷ Few cases of conservative management of these fistulae has also been reported in the literature.³ Similarly, our patient was managed by resection of diseased ileum & primary closure of bladder and ATT for six months.

CONCLUSION

Spontaneous tuberculous ileovesical fistulas are rare. There should be a strong clinical suspicion in endemic areas. Separation of ileum from bladder, resection of diseased ileum and bladder closure followed by ATT has satisfactory outcome.

CONFLICT OF INTEREST / DISCLOSURE

None.

REFERENCES

1. Scozzari G, Arezzo A, Morino M. Enterovesical fistulas: diagnosis and management. *Tech Coloproctol.* 2010 Dec;14(4):293-300.
2. Balachandra D, Nag HH, Sakhuja P, Barman S. Tuberculosis of Intestine with Concurrent Complex Enterovesical and Enterocutaneous Fistula. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH.* 2018 Jul 1;12(7):PD3-5.
3. Ramchandra N, Mayank V, Sanjeev K, Akshay P, Vaibhav G, Abhishek M, Ritvij P, Ashar S. Ileovesical fistula due to tuberculosis: a rare presentation. *Int J Health Sci Res.* 2015;5(2):414-7.
4. Golabek T, Szymanska A, Szopinski T, Bukowczan J, Furmanek M, Powroznik J, Chlosta P. Enterovesical fistulae: aetiology, imaging, and management. *Gastroenterol Res Pract.* 2013;2013:617967.
5. Shinojima T, Nakajima F, Koizumi J. Efficacy of 3-D computed tomographic reconstruction in evaluating anatomical relationships of colovesical fistula. *Int J Urol.* 2002 Apr;9(4):230-2.
6. Kwon EO, Armenakas NA, Scharf SC, Panagopoulos G, Fracchia JA. The poppy seed test for colovesical fistula: big bang, little bucks! *J Urol.* 2008 Apr;179(4):1425-7.
7. Ferguson GG, Lee EW, Hunt SR, Ridley CH, Brandes SB. Management of the bladder during surgical treatment of enterovesical fistulas from benign bowel disease. *J Am Coll Surg.* 2008 Oct;207(4):569-72.