



Case Report

Ileovesical Fistula Due to Tuberculosis: A Rare Presentation

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Received: 11/12/2014

Revised: 10/01/2015

Accepted: 12/01/2015

ABSTRACT

Introduction: Ileovesical fistula is an uncommon complication of Crohn's disease, appendiceal diverticulitis, Meckel's diverticulum and Tuberculosis. Ileovesical fistula is thought to be initiated by transmural tuberculous inflammation of ileal loop with subsequent perforation and extramural suppuration.

Presentation of case: A 16 year old female presented with pain in abdomen and vomiting 8 months back, after taking treatment also symptoms persisted. After 8 months she presented with pneumaturia and passing turbid urine since last 1 month. Urine showed plenty of pus cells. Mantoux test and ELISA for tuberculosis came positive. Barium enema revealed extravasation of barium into urinary bladder from terminal ileum. Empirical anti tubercular therapy started and patient had started showing response.

Discussion: Inflammatory bowel disease accounts for approximately 3.5% of cases of vesicoenteric fistulas, with Crohn's disease being the most common cause. The most relevant and pathognomonic manifestations of ileovesical fistula are pneumaturia and fecaluria, passage of gas and feces per urethra. Spontaneous closure of fistula occurs after antitubercular therapy.

Conclusion: Tubercular ileovesical fistulas are rare. There should be a strong clinical suspicion in endemic areas. Empirical Antitubercular medication should start in the absence of evidence of tuberculosis.

Key words: Ileovesical fistula; Tuberculosis; Crohn's disease.

INTRODUCTION

Ileovesical fistula is a relatively uncommon complication of Crohn's disease, appendiceal diverticulitis, Meckel's diverticulum and non-Hodgkin's lymphoma of the terminal ileum. ^[1,2] The symptoms of terminal pneumaturia and faecaluria are pathognomic of enterovesical fistula. ^[3]

Though Crohn's disease is commoner in western literature, in India tuberculosis is the major cause of ileal stricture. The fistula is thought to be initiated by transmural tuberculous inflammation of ileal loop with subsequent perforation and extramural suppuration. Exudative ascites, positive Mantoux test, strongly positive ELISA test

for tuberculosis and tuberculous granulomas in the ileum confirm tuberculosis as the cause of an ileovesical fistula in our patient. Empirical anti-tuberculous therapy resulted in complete recovery in our patient without surgery.

CASE REPORT

A 16 year old female presented for health seeking advises for abdominal pain and vomiting to medical practitioner 8 months back. She was investigated for the same with routine haematology, Urine, Upper Gastrointestinal Scopy and ultrasonography (USG) of abdomen and pelvis. All investigations were within normal limits except USG of abdomen suggestive of chronic pericecal inflammation. Patient was treated conservatively but symptoms persisted. Then after 8 months Patient came with pneumaturia and passing turbid urine for last 1 month. She also complained of severe pain in hypogastric region with frequency and burning micturition. Urine showed plenty of pus cells. USG abdomen and pelvis showed irregular terminal ileal wall thickening with loculated fluid collections and sinuses. One of the diseased loop showed closed proximity with bladder apex (? fistula formation) as shown in figure 1. Focal, nodular thickening of the bladder wall noted at this site suggestive of bladder debris. Mantoux test came positive after 48hours, ELISA test for tuberculosis done which showed strongly positive result. Barium enema showed extravasation of barium into urinary bladder from distal ileum loop as shown in figure 2&3. Though Urine didn't show any Acid fast bacilli on ZN staining and Chest X-ray also not showed any abnormality. Empirical Anti tuberculous medication started and patient had started showing response. After 6 weeks duration on follow up she is asymptomatic.



Figure 1: Ultrasonographic image of Right iliac fossa showing irregular thickening of terminal ileal loop with fluid collections as shown by arrow.



Figure 2: Showing skiagram of Barium enema showing extravasation of barium into urinary bladder from terminal ileal loop.

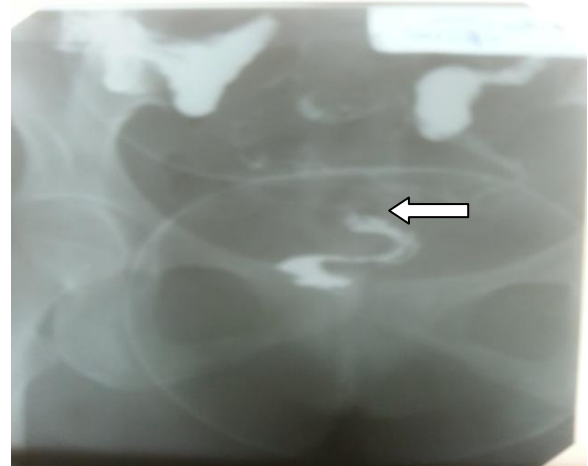


Figure 3: Skiagram of barium enema showing delineated fistulous tract from distal ileal loop as shown by arrow.

DISCUSSION

Ileovesical fistulas occur usually due to inflammation of the bowel, mainly inflammatory bowel diseases, tuberculosis, diverticulitis and rarely due to malignancy of small bowel, trauma, carcinoma of the urinary bladder and iatrogenic injuries.

Inflammatory bowel disease accounts for approximately 3.5% of cases of vesicoenteric fistulas, with Crohn's disease being the most common cause. Crohn's disease is likely to cause multiple fistulas: ileovesical, ileoascending colonic, and ileosigmoidal. Other less common causes of vesicoenteric fistulas include tuberculosis, appendiceal abscess and actinomycosis.

Despite the fact that most vesicoenteric fistulas are the result of primary bowel disease, patients most often have urologic symptoms like frequency, urgency, dysuria and hematuria, with localizing intestinal symptoms like abdominal pain, diarrhea, constipation, intestinal obstruction in up to half of patients. A wide range of symptoms exist that are of variable intensity but generally of insidious nature, making the diagnosis of a fistula elusive and delayed.

The most relevant and pathognomonic manifestations of ileovesical fistula are pneumaturia and fecaluria, passage of gas and feces per urethra. Pneumaturia occurs in approximately 50%-60% of patients with enterovesical fistula but alone is nondiagnostic, as it can be caused by gas-producing organisms (eg, *Clostridium* species, yeast) in the bladder, particularly in patients with diabetes mellitus (i.e., fermentation of diabetic urine) or in those undergoing urinary tract instrumentation. Pneumaturia is more likely to occur in patients with diverticulitis or Crohn's disease than in those with cancer. Fecaluria is pathognomonic of a fistula and occurs in approximately 40% of cases. Patients may

describe passing vegetable matter in the urine. The flow through the fistula predominantly occurs from the bowel to the bladder. [4]

With regard to treatment, different methods have been employed in cases reported in the literature. Three cases in which *M. tuberculosis* was found in urine or pus had spontaneous closure of fistula after antitubercular chemotherapy. [5-7] Another case underwent a successful pull-through operation. [8] One case [7] received no treatment whereas another [9] required a combined abdominoperineal approach with omental interposition and no faecal or urinary diversion.

CONCLUSION

Spontaneous tubercular ileovesical fistulas are rare. There should be a strong clinical suspicion in endemic areas. Conservative management with antitubercular drugs and urinary diversion with or without faecal diversion has a high success rate and should be the first line of treatment even if urine is negative for acid-fast bacilli.

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How to cite this article: Ramchandra N, Mayank V, Sanjeev K et. al. Ileo-vesical fistula due to tuberculosis: a rare presentation. Int J Health Sci Res. 2015; 5(2):414-417.

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