Colovesical fistula: A rare cause of recurrent urinary tract infection in young male managed conservatively

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ABSTRACT

Colovesical fistula is a rare disease which has abnormal communication between the colon and urinary bladder, and it is most commonly caused by diverticular disease. A 25-year-old male was presented with recurrent episodes of dysuria since last 3 yearrs. Further examination revealed that he had associated bowel complaints of frequent stools and intermittent loose stools, which further subsided on taking antibiotics. Colonoscopy was performed which revealed inflamed colonic mucosa. The Biopsy was taken from the concerned region which suggested chronic nonspecific inflammation. Medical management can be considered in patients with colovesical fistula who are willing for long term surveillance.

Keywords: *Colovesical fistula, Conservative management, Urinary tract infection, Young male.*

Colovesical fistula is a rare disease which has abnormal communication between the colon and urinary bladderand is commonly caused by diverticular disease, followed by malignancy and Crohn's disease [1-3]. The incidence of the colovesical fistula is around 1 in every 3000 surgical hospital admissions. The disease commonly affects the population in their fifth and sixth decade with male to female ratio of 3:1 [1]. The preferred management of colovesical fistula is primary resection with anastomosis performed as a 1-stage procedure [4,5]. Colovesical fistula has been managed medically in a few reported case. Here, we report this case as it was presented in a young male and was managed conservatively.

CASE REPORT

A 25-year-old nonsmoker malewas presented to the urology outpatient department with a complaint of recurrent episodes of dysuria persistent since last 3 years. The patient had associated bowel complaints of increased frequency of stools and intermittent loose stools, which subsided on taking ciprofloxacin 500mg for 5 days. Since last 1 month, the patient started having severe dysuria which was not relieved on medication. After getting a detailed history, it was found that dysuria was associated with pneumaturia, fecaluria, and suprapubic pain since 1 week. The patient had undergone colonoscopy 1 year back for similar complain, it revealed signs of chronic inflammation. He had no previous surgical history.

On physical examination, the patient was afebrile, conscious oriented and his pulse rate and blood pressure were within the normal range. His abdomen was soft and tender in the suprapubic region. Per rectal examination had no significant findings. Urine examination showed plenty of pus cells; the culture was positive for *E.coli* while the complete blood count showed raised white blood cells (15160 cells/cmm). The routine examination of his stool sample was normal. Serum electrolytes and serum creatinine were within the normal limits.

Ultrasound of the abdomen suggested cystitis with thickened urinary bladder wall with hyperechoic debris. Micturating Cystourethrogram was performed which showed colovesical fistula over the right posterolateral aspect. Colonoscopy was performed with clinical suspicion of Crohn's disease which revealed inflamed colonic mucosa. There was fibrotic mucosa with pouting granulation tissue 5 cms from the anal verge.The biopsy collected from the concerned region suggested chronic nonspecific inflammation.

Meanwhile, a gastroenterologist opinion was taken and the patient was started on a course of mesalamine 400mg, two times a day for 8

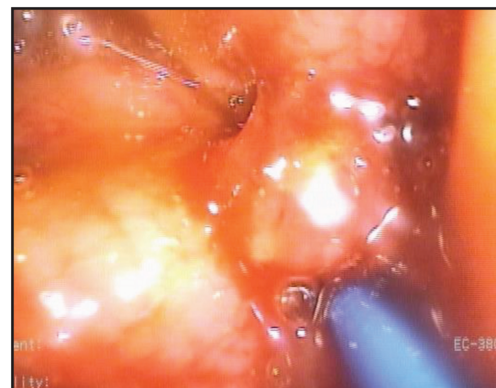

Figure 1: Colonoscopy - Fibrotic Mucosa with pouting granulation tissue

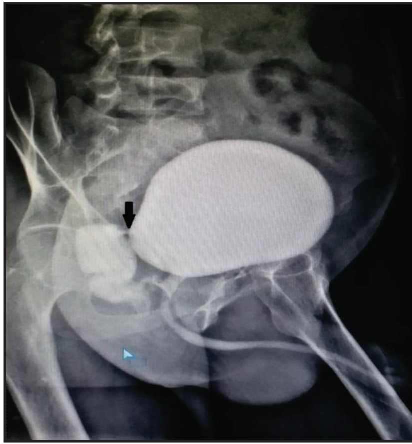

Figure 2: MCU 1- arrow showing colovesical fistula in right Posterolateral side

weeks. After a course of mesalamine and ciprofloxacin 500mg for 5 days according to urine culture, the patient improved symptomatically. On followup at 4 weeks and 8 weeks, the patient was symptom-free, he was advised further radiological test to confirm resolution of colovesical fistula but he denied. He is on clinical surveillance since last 2 years and has not shown annny symptoms of the disease.

DISCUSSION

Colovesical fistula can be present in up to 8% of the patients with Crohn's disease. They are most commonly seen over ileum (64%), colon (21%), and rectum (8%) [6,7]. Pneumaturia and faecaluria are pathognomic symptoms of colovesical fistula[3]. In our case, the cause of colovesical fistula was determined based on clinical symptoms, colonoscopy, and colonoscopic biopsy findings of chronic inflammatory disease of bowel, suggesting Crohn's disease. Proper investigation of clinical history is essential as pneumaturia and faecaluria can be missed, which are pathognomic in the diagnosis of colovesical fistula.

CT scans are diagnostic in 90–100% of patient with a Colovesical fistula [8,9] based on the air in the urinary bladder or identifying fistulous tract. Another advantage of CT scan is that it can rule out a differential diagnosis for colovesical fistula as it can diagnose diverticular diseases, and colonic malignancy. In our case, CT scan was not done as Micturating Cystourethrogram showed fistulous communication which was suggestive of colovesical fistula.

There are few reports of medical management for colovesical fistula. Amin *et al* [10] managed 6 patients of colovesical fistula on intermittent antibiotic therapy alone, without any significant complications. Similarly, Solkar *et al* [11] retrospectively studied six patients who declined surgical intervention. They were managed conservatively and did not exhibit urosepsis or significant changes in renal function. In this case report also, the complete resolution of the fistula was not documented. In our case report, the patient was started on mesalamine and ciprofloxacin therapy as the patient refused to go for the surgical intervention. The patient improved symptomatically with medical management and is under surveillance since 2 years. But longer surveillance is required to ascertain the success of medical management in the treatment of colovesical fistula.

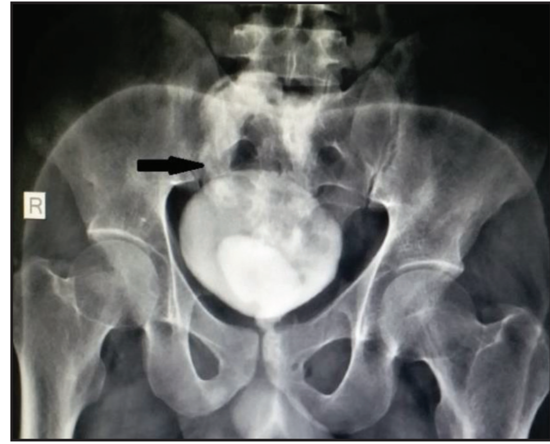

Figure 3: MCU 2- Showing Colovesical Fistula

CONCLUSION

Recurrent urinary tract infection in young male patient warrants careful examination off the history and the evaluation to diagnose colovesical fistula. Medical management can be considered in patients with colovesical fistula who are willing to undergo long-term surveillance.

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