

# Colovesical Fistula: A Rare Complication of Diverticulitis in Young Male

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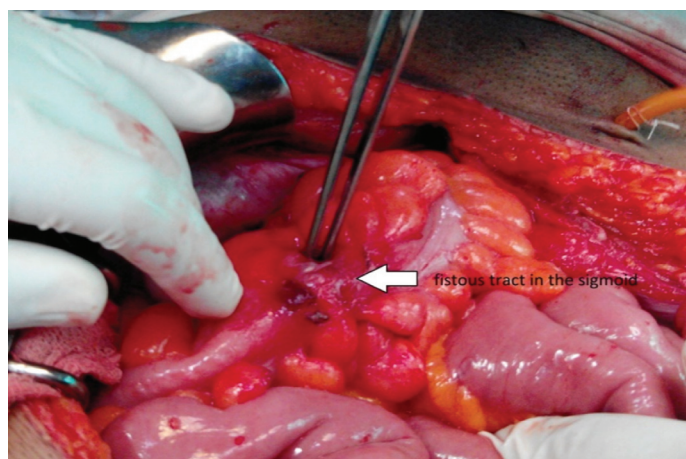
## ABSTRACT

Herniation of colonic mucosa through the circular muscles at the point of penetration of blood vessels results in diverticuli formation. It is seen most commonly in the large bowel in sigmoid colon. Common complications of diverticular disease are inflammation and bleeding per rectum and rarely fistula formation which are seen mostly in elderly patients. A case of colovesical fistula with diverticulitis in young male aged 30 years is reported.

**Keywords:** Communication, Fecaluria, Inflammatory, Sigmoid diverticuli

## CASE REPORT

A 30-year-old male patient who presented to a tertiary care centre with complaints of fecaluria since one month, not associated with fever, pain in abdomen or symptoms of urinary tract infection. Bowel habits were normal. Patient was on medications for diabetes and hypothyroidism since five years. On physical examination no abnormality was detected. Per Rectal Examination and proctoscopy were normal. Haematological investigation revealed no abnormality. Urine investigations revealing features of urinary tract infection. Patient underwent contrast enhanced CT scan of abdomen and pelvis, which was suggestive of a fistulous communication between the sigmoid diverticuli and urinary bladder [Table/Fig-1]. Cystoscopy demonstrated two suspicious openings at dome of bladder. Colonoscopy demonstrated fistulous opening 35 cm from anal verge. Colonoscopic as well as cystoscopic biopsies were taken and were negative for malignancy. The tumour marker carcinoembryonic antigen was not elevated. Diagnosis of colovesical fistula secondary to sigmoid diverticular disease was made. Patient underwent an exploratory laparotomy with excision of fistulous tract in the bladder and left colonic resection and anastomosis [Table/Fig-2]. The bladder opening was sutured in two layers over suprapubic catheter and per



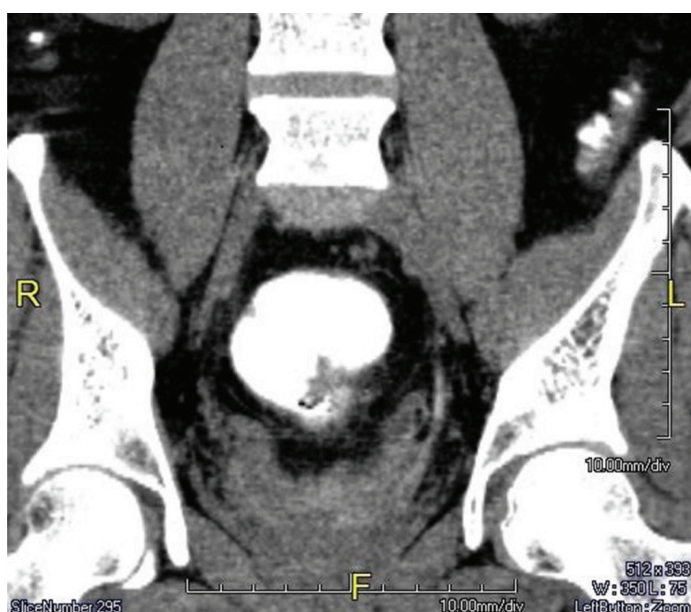
[Table/Fig-2]: Intraoperative demonstration of colovesical fistula

urethral catheter. The post-operative recovery was uneventful. The patient was discharged on postoperative day 15 and had no urinary complaints during two months of follow up.

## DISCUSSION

Colovesical fistula in patients with sigmoid diverticular disease is seen in elderly. The incidence of colovesical fistula in young patients is extremely rare. Diet low in fibre, high in carbohydrate, consumption of meat and sugar are associated with high incidence of fistula. Only 2-5% of cases occurring in those under 40 years of age and amongst them fistulas occur in 2% of patients with complicated diverticular disease [1]. The formation of the fistula results from a local inflammatory process that results in an abscess, which spontaneously decompresses by perforating into an adjacent viscus or through the skin, which are colovesical or enterocutaneous fistulas [1]. Diverticulitis can also complicate as diverticular abscess, fistula, generalized peritonitis, obstruction or diverticular associated colitis. Sigmoid colon is the most common site of diverticula formation as it is the narrowest part of colon. The fistulous tract is commonly single, but multiple tracts are found in 8% of patients [1].

Diverticulitis is the most common cause of a colovesical fistula, accounting for 40 to 90% of cases. However, it may be caused by malignant diseases, Crohn's disease, radiation, post-surgery etc, [2]. The underlying mechanism is the direct extension of a ruptured diverticulum or secondary erosion of a diverticular abscess into



[Table/Fig-1]: CT scan demonstrating fistulous tract with Contrast extravasation and air in bladder

the bladder. Colovesical fistula is more common in the sixth and seventh decades of life. The common clinical presentations are the symptoms of urinary tract infection, pneumaturia and fecaluria. Fecaluria is pathognomonic for this condition. There is a delay in diagnosis in some cases as patient may just have some features suggestive of urinary tract infection [3].

Diagnosis is by Contrast enhanced CT with rectal contrast and demonstration of air in bladder or contrast leak into bladder. Cystoscopy and colonoscopy can be added to get additional information regarding site, number and size of fistulous opening and for biopsy to rule out malignancies. The aim of the diagnostic procedure for colovesicular fistula is to seek appropriate therapeutic strategy by assessing the existence of fistula and the underlying etiology. Resection of the inflamed bowel and primary repair of the bladder wall is the treatment of choice [3,4]. Similar cases have been reported in literature but in older population [5].

## CONCLUSION

The relevance of the case is to highlight the occurrence of colovesical fistula secondary to diverticular disease in a 30-year-old young male patient which is uncommon.

## REFERENCES

- [1] Dr T Murphy, Prof RH Hunt, Prof M Fried, Dr JH Krasbshuis. World Gastroenterology Organisation Practice Guidelines: 2007: 1-16.
- [2] Mileski WJ, Joehl RJ, Rege RV, Nahrwold DL. American Society of Colon and Rectal Surgeons. One-stage resection and anastomosis in the management of colovesical fistula. *Am J Surg.* 1987;153:75.
- [3] Melchior S, Cudovic D, Jones J, Thomas C, Gillitzer R, Thuroff J. Diagnosis and surgical management of colovesical fistulas due to sigmoid diverticulitis. *J Urol.* 2009;182:978-82. [PubMed]
- [4] Najjar SF, Jamal MK, Savas JF, Miller TA. The spectrum of colovesical fistula and diagnostic paradigm. *Am J Surg.* 2004;188:617-21. [PubMed]
- [5] Yang HY, Sun WY, Lee TG, Lee SJ. A Case of Colovesical Fistula Induced by Sigmoid Diverticulitis. *Journal of the Korean Society of Coloproctology.* 2011;27(2):94-8. doi:10.3393/jksc.2011.27.2.94.

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