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CASE REPORT

Caecovesical Fistula Resulting From Foreign Body Injury to Perianal Region: A Rare Occurrence

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Abstract

Colovesical fistula is a recognized condition, most commonly due to diverticular disease. However, traumatic injuries, especially those involving foreign bodies, present a unique etiological factor requiring prompt intervention. We document the first case of a caecovesical fistula caused by foreign body due to perianal injury highlighting the importance of being vigilant in trauma patients with chronic unexplained lower urinary tract symptoms.

Keywords: Colo vesical fistula (CVF), Caecovesical fistula, Foreign body injury, Traumatic injury

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Case Discussion

A 25-year-old man presented to us with complaints of recurrent diarrhoea, burning micturition, intermittent abdominal pain and occasional fever for a period of 10 months for which he was on medical treatment in local hospital. He gives history of fall onto a piece of wood in the jungle a year prior, injuring the perianal region for which he was managed in a local clinic and the wound was sutured. Abdomen was soft with mild tenderness in lower abdomen. Rectal examination showed no abnormality. Hemoglobin 10.3 mg/dl Total leukocyte count: 14270/mm^3

Creatinine: 1.9 mg/dl

Urine had numerous red blood cells, pus cells and bacteria.

Cystoscopy found Large foreign body ~5 cm in the urinary bladder, both ureteric orifices were visualised. Colonoscopy showed oedematous mucosa in caecum with encased faecal matter.

NCCT abdomen identified a large hyperdense structure in the urinary bladder with thickening and right ureteric dilatation.

MRI abdomen detected an intravesical rounded structure 7.8 cm X 3 cm with irregularly thickened urinary bladder with moderate bilateral hydronephrosis and acute pyelonephritis (Fig. 1). Given his clinical history and radiological findings of a foreign body an exploratory laparotomy was proposed and executed. Intraoperatively, a caecovesical fistula caused by a foreign object was discovered (Fig. 2a and b). The fistula was dismantled and foreign body removed following which bladder wall and the caecum were primarily repaired. An omental patch was sutured to the bladder wall. Additionally, a suprapubic catheter (SPC) was placed, and a diversion ileostomy was performed. Postoperative period was uneventful.

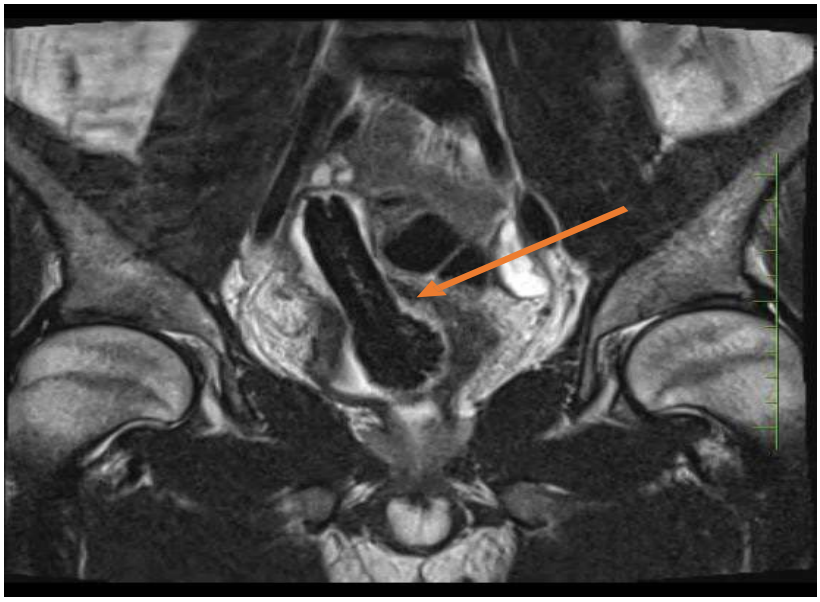

Figure 1. MRI showing elongated foreign body (Orange arrow)

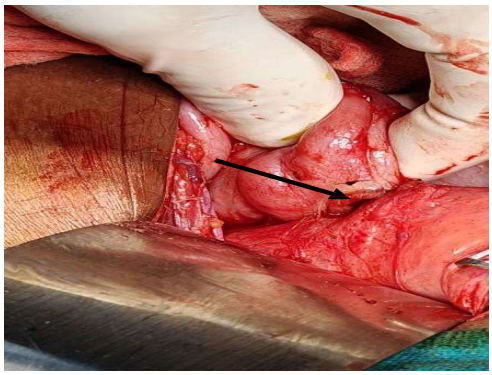

Figure 2a. Caecovesical fistula (Black arrow)

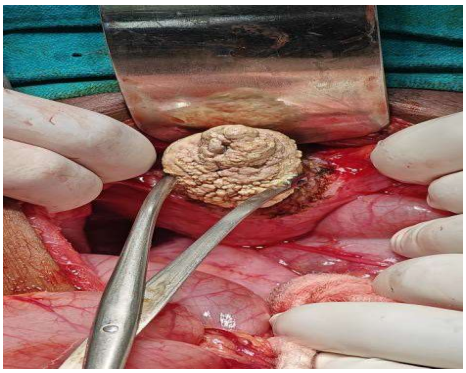

Figure 2b. Foreign body being extracted out

Discussion

Colovesical fistulas representing abnormal connections between the colon and bladder, are complex clinical conditions with various causes. The most common cause is colonic diverticulitis, leading to fistula formation due to inflammation and perforation [1]. Other causes include neoplasms, inflammatory bowel diseases like Crohn's, radiation therapy, and trauma [1]. These varied etiologies require a broad differential diagnosis in patients with unexplained lower urinary tract symptoms, pneumaturia, fecaluria, and recurrent infections [2]. Diagnosing colovesical fistulas can be difficult, especially when the underlying cause is atypical or symptoms are mild. Although diverticulitis remains the most frequent cause, there have been few reports in literature about colovesical fistulas due to foreign bodies perforating the bowel and creating a fistulous connection with the bladder. Foreign bodies ranging from chicken bones [3], modeling-knife blades [4], and biliary stents [5] have been reported. In patients presenting with chronic unexplained lower urinary tract symptoms, intravesical foreign body is to be kept into consideration as it can remain undiagnosed for prolonged periods [6]. Although there is an isolated case of congenital caecovesical fistula [7] this is the first reported case of caecovesical caused by foreign body due to traumatic injury to perianal region. During the work up of suspected colovesical fistula, cystoscopy and colonoscopy play a role during the initial workup [8]. However more detailed radiological studies such as computed tomography (CT) and magnetic resonance imaging (MRI) are required as they play an increasing role in diagnosing and planning of management of colovesical fistula. Cross-sectional imaging with CT scan gives detailed information often revealing air or contrast in the bladder, while MRI offers superior soft tissue contrast, aiding in visualizing the fistula and surrounding inflammation [2,9]. Colovesical fistula typically mandates surgical intervention and it usually involves removal of the of any foreign body, resection and repair of the affected bowel segment and oversewing of bladder defect [10]. In the current era, laparoscopic approach to managing colovesical fistulas in high-volume colorectal surgery centres is both effective and safe as it offers an edge over open surgery in terms of reduced surgical site infections and fewer medical complications. However, in patient with ongoing sepsis and persistent inflammation involving the bowel, bladder, and pelvis, faecal diversion alone or along with resection may be required to decrease symptoms and control sepsis [11].

Conclusion

Colovesical fistula is an uncommon clinical condition and it requires a collective

team approach for management. This case highlights the need for considering rare entities such as foreign bodies as a cause of colovesical fistula especially in patients with a history of trauma increasing the etiological spectrum of this condition. Early diagnosis and timely surgical intervention are critical to prevent further complications and to restore the patient's quality of life.

Conflicts of interest

The authors declares that they do not have conflict of interest.

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Consent to participate and publish

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

References

1. Zizzo M, Tumiati D, Bassi MC, Zanelli M, Sanguedolce F, Porpiglia F, et al. Management of colovesical fistula: a systematic review. Minerva Urol Nephrol. 2022;74(4):400-8. doi:10.23736/S2724-6051.21.04750-9.
2. Najjar SF, Jamal MK, Savas JF, Miller TA. The spectrum of colovesical fistula and diagnostic paradigm. Am J Surg. 2004;188(5):617-21. doi:10.1016/j.amjsurg.2004.08.016
3 Khan MS, Bryson C, O'Brien A, Mackle EJ. Colovesical fistula caused by chronic chicken bone perforation. Ir J Med Sci. 1996;165(1):51-2. doi:10.1007/BF02942805.
4. Napier-Hemy R, Thampuran S, Elem B. Colovesical fistula after ingestion of a modelling-knife blade. BJU Int. 1999;83(3):350. doi:10.1046/j.1464-410X.1999.00842.x.
5. Wilhelm A, Langer C, Zoeller G, Nustede R, Becker H. Complex colovesicular fistula: A severe complication caused by biliary stent migration. Gastrointest Endosc. 2003;57(1):124-6. doi:10.1067/mge.2003.71.
6. Eckford SD, Persad RA, Brewster SF, Gingell JC. Intravesical foreign bodies: Five-year review. Br J Urol. 1992;69(1):41-5. doi:10.1111/j.1464-410X.1992.tb15456.x.
7. Ondima LIP, Atipo MO, Opara SAO, Assey EJA, Barale IL. Isolated caeco-vesical fistula: A case report. Open J Urol. 2020;10(12):309-14. doi:10.4236/oju.2020.1012036.
8. Garcea G, Majid I, Sutton CD, Pattenden CJ, Thomas WM. Diagnosis and management of colovesical fistulae: six-year experience of 90 consecutive cases. Colorectal Dis. 2006;8(4):347-52. doi:10.1111/j.1463-1318.2005.00928.x.
9. Tang YZ, Booth TC, Swallow D, Thomas K, Kane P, Kirkham A, et al. Imaging features of colovesical fistulae on MRI. Br J Radiol. 2012;85(1018):1371-5. doi:10.1259/bjr/55871151.
10. Niebling M, Van Nunspeet L, Zwaving H, Eddes EH, Bosker R, Eeftinck Schattenkerk M. Management of colovesical fistulae caused by diverticulitis: 12 years of experience in one medical centre. Acta Chir Belg. 2013;113(1):30-4. doi:10.1080/00015458.2013.11680881.
11. Gilshtein H, Yellinek S, Maenza J, Wexner SD. Surgical management of colovesical fistulas. Tech Coloproctol. 2020;24(8):851-4. doi:10.1007/s10151-020-02247-0.