

CASE REPORT

MRI IN ISOLATED TRANS-SPHINCTERIC FISTULA IN ANO OPENING NEAR SCROTUM-A VERY RARE ENTITY: 2 CASE REPORTS

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ABSTRACT: Fistula in ano is an inflammatory condition affecting perianal region and adjacent structures. It is a cause of significant morbidity, requiring repeated surgical treatments due to its high recurrence rate. Most perianal fistulous disease have external openings located within 2.5 cm of the anal verge. It is rare for an anal fistula to involve the scrotum. Such involvement can occur frequently in patients with inflammatory bowel disease, especially Crohn's disease and rarely in ulcerative colitis. Isolated involvement of scrotal region is quite rare without concomitant inflammatory bowel disease. This has been rarely reported in the literature. We present 2 isolated cases of trans sphincteric fistula in ano with external opening in the vicinity of scrotum. Both our cases did not reveal any signs of inflammatory bowel disease.

KEYWORDS: Fistula in ano, trans-sphincteric, scrotum, inflammatory bowel disease.

CASE REPORT 1: A 38 year male patient presented with discharging sinus in the anterior aspect of scrotum in midline since 2 months. On local examination the opening was noted at posterior scrotal wall with thin watery discharge from it.

Multiplanar, multiecho MRI sequences of the pelvis was done in a 0.35 Tesla MR scanner-MAGNETOM- C by Siemens Healthcare. The study included T1, T2 and STIR imaging in all three planes, which revealed a linear trans-sphincteric fistulous track arising from 11'O clock position of anal canal ~ 1.0 cm above dentate line. It extended inferiorly for ~ 1.7 cm and then anteriorly for ~ 7.6 cm, inferior to the penile shaft with external opening in anterior midline of scrotum. The track appeared hyper intense on STIR (Fig. 1 and 2), hypo intense on T1 (Fig. 3) and hyperintense with peripheral hypointensity on T2 weighted images (Fig. 4).

Anal canal and anal opening was otherwise normal. Rest of the colonic structures were within normal limits to the extent visualized. No obvious collection. Pelvic floor muscles were normal. Urinary bladder was well distended and appeared normal. No obvious communication was seen between the bladder and rectum. Prostate was normal sized. Both testes were normal in size and signal intensities. Bilateral sacro-iliac and hip joints were within normal limits.

This patient underwent sphincter saving surgery with resection of the track.

CASE REPORT 2: A 27 year male patient presented with discharging sinus in the posterior aspect of scrotum in midline since 6 months.

A trans-sphincteric linear fistulous track arising from 3'o clock position of anal canal, ~ 1.3 cm inferior to dentate line. It was noted to extend antero-inferiorly for a length of ~ 4.3 cm and opening exteriorly at postero-inferior aspect of scrotum in midline. Rest of the pelvic structures, viscera and osseous structures were within normal limits.

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The patient underwent resection of the fistulous track which was superficially located. Both the patients did not have any associated bowel pathologies on further evaluation.

DISCUSSION: Fistula in ano is one of the inflammatory condition affecting perianal region and adjacent structures. It is a cause of significant morbidity.⁽¹⁾ It is an uncommon process, with a prevalence of 0.01%. It predominantly affects young males, with a male-to-female ratio of 2:1. The most common presenting symptom is discharge (65% of cases), but local pain due to inflammation is also common.⁽²⁾

The perianal fistulas often require surgical treatment. It is associated with a significant recurrence rate.⁽³⁾ Successful surgical outcome in such cases depends on precise preoperative assessment of the course of the primary fistulous track and the site of any secondary extension or abscesses.⁽⁴⁾

In most cases of perianal fistulas external openings are located within 2.5 cm of the anal verge. It is rare for an anal fistula to involve the scrotum.⁽⁵⁾ Such involvement can occur in patients with inflammatory bowel disease, especially Crohn's disease and rarely in ulcerative colitis.⁽⁶⁾

Isolated involvement of scrotal region is quite rare without concomitant inflammatory bowel disease. This has been rarely reported in the literature.⁽⁵⁾

Magnetic resonance imaging (MRI) plays a crucial role in this regard. MR imaging allows identification of fistulous tracks and associated complications like abscesses. It also provides detailed anatomic descriptions of the relationship between the fistula and the anal sphincter complex, allowing better surgical treatment planning, significantly reducing recurrence rate and possible complications of surgery, like fecal incontinence.^(7,8)

Identification of the tract is most easily performed on fat-saturated sequences like STIR, where the track usually appears hyperintense, especially when infected. T2- weighted sequences without fat suppression give detailed information on the relationship of the tract and surrounding anatomic structures, like anal sphincter complex and levator ani muscle.^(1,6)

CONCLUSIONS: Fistula in ano is an uncommon entity and still an uncommon occurrence is disease extending to the vicinity of scrotum. Isolated occurrence of such an entity in the absence of inflammatory bowel disease is known to occur, although very rarely. In such cases MRI with its multiplanar capabilities is much helpful, not only to know the extent of disease but also its complications. Such cases should be worked up to rule out associated bowel pathologies.

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Fig. 1: STIR coronal image showing linear hyper intense fistulous track (red arrows) arising from anal canal, coursing anteriorly to open in the anterior midline of scrotum.



Figure 1

Fig. 2: STIR axial image showing linear hyper intense fistulous track arising from anal canal, coursing anteriorly to open in the anterior midline of scrotum.

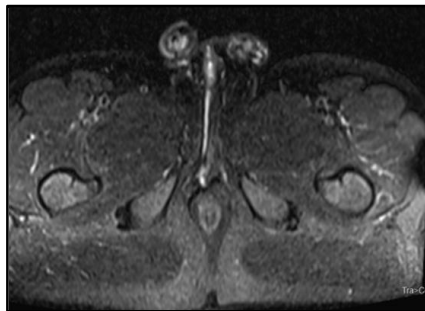


Figure 2

Fig. 3: T1 SE axial image showing linear hypo intense fistulous track.

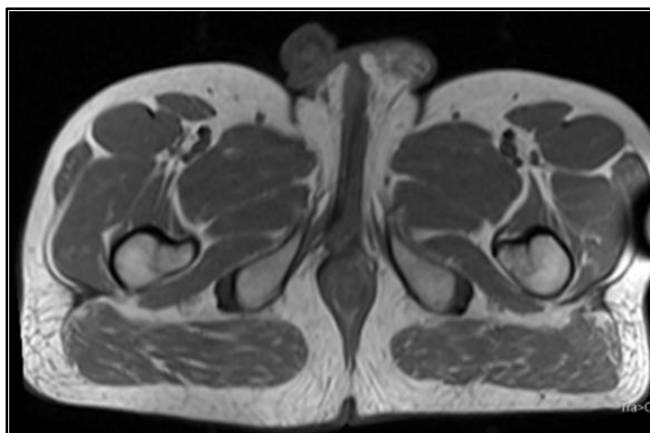


Figure 3

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Fig. 4: T2 TSE axial image showing linear hyper intense fistulous track.

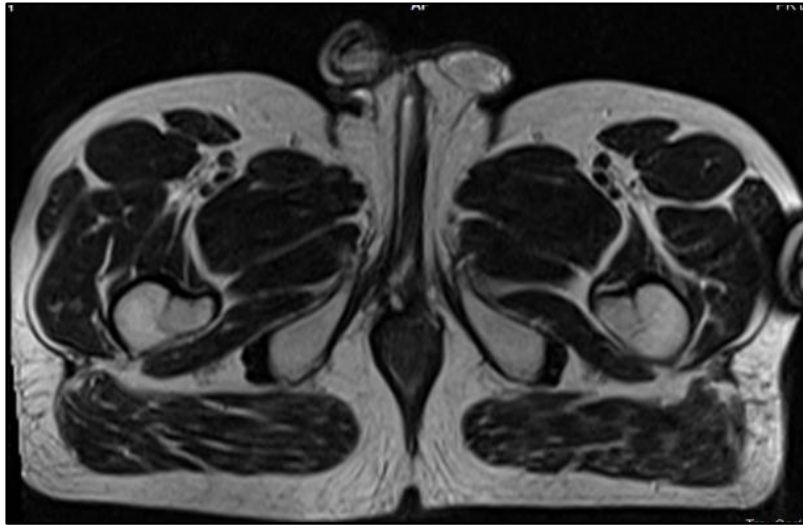


Figure 4

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