

# An Unusual Case of Complex Transphincteric Fistula-In-Ano

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## Abstract

Fistula in ano is a common benign perianal condition that affects predominantly male patients due to various etiological factors like repeated perianal infections, tuberculosis, Crohn's disease of perineum, Hidradenitis suppurativa, HIV infection, etc. Complex variety is encountered in very few patients, which requires special treatment for its cure. Extrasphincteric fistulae occur in only 5% of total fistula in ano patients. We would like to report such an unusual case of fistula in ano where its one tract reached almost to the popliteal fossa in the posterior compartment of the thigh.

## CASE HISTORY

A 32-year-old Hindu male patient, caterer by occupation, came with complaints of persistent foul smelling discharge from his perianal wound for one month. The patient underwent anal fistulectomy under spinal anesthesia at a charitable hospital in the city in 2006. The histopathology report showed a fistula tract with chronic inflammation. In 2007, he again took treatment from another tertiary care hospital in the city for 6 months, but the wound did not heal. Finally, he came to our institute 6 months back for further treatment. He presented with painful defecation, mucus discharge in stools and foul smelling discharge from the wound. There was no associated history of any fever, bleeding per-rectally or constipation. He did not give any history of major medical illnesses or other surgery done in the past.

The patient mainly complained of pain in his left buttock that was radiating to the left hamstring almost reaching the popliteal fossa.

On examination, the patient's vital parameters were stable. On local examination, there was one visible external opening in the left perianal area anteriorly. The internal opening was palpable below the dentate line. The external opening was catheterized almost reaching a distance of 25 cm in his left hamstring, which was palpable subcutaneously. With the catheter in situ, a fistulogram was performed which showed a complex type of fistula. Its superior limb was going transphincterically above the dentate line. Its inferior limb

was forming a 10 x 5 x 2cm cavity and then extending into the left hamstring muscles subcutaneously.

## Figure 1

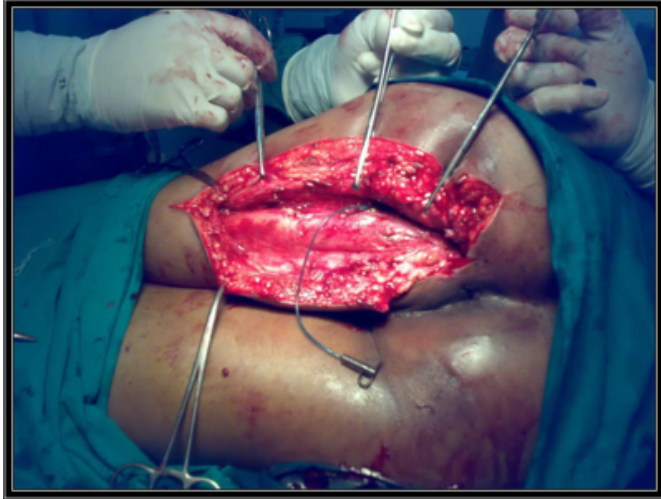
Figure 1: Fistulogram showing a cavity in the left gluteal area and its extension to the hamstring.



The patient underwent redo surgery under spinal anesthesia. All findings were confirmed.

### Figure 2

Figure 2: Posterior compartment fistula tract extension confirmed with catheter in situ.



The entire tract was meticulously dissected and excised along with slough and sent for histopathological examination. The wound was kept open to heal by secondary intention. At the end of two weeks, when the entire wound was covered with healthy granulation tissue, secondary suturing was done after undermining the edges over a corrugated drain. The patient's histopathology report yielded organizing non-specific inflammation without any evidence of tuberculosis or malignancy.

### Figure 3

Figure 3: The wound, healthy, shrunken and ready for secondary suturing.



The patient was discharged after two weeks after suture removal and now, after 4 months follow-up, he is totally

healthy and asymptomatic.

## DISCUSSION

Anorectal sepsis can be complicated by a fistula in ano in about 25% of patients during the acute phase of sepsis or within six months thereafter (1). It is now widely accepted that infection of the anal gland is the cause of the cryptoglandular infection that results in an abscess in the acute stage and in a fistula in its chronic stage. Pus from this abscess contains intestinal microorganisms (2). From the intersphincteric space, the infection can spread in 3 directions – downwards to the perineal space; laterally piercing the external sphincter to the ischiorectal fossa and upwards in the intersphincteric plane to the supralelevator space. From the above-mentioned spaces, infection can spread anteriorly to scrotum/vulva and groin; posteriorly to pre- and post-sacral spaces and then, rarely, to the gluteal region and thigh, and superiorly to pre- and retroperitoneal spaces.

Parks and colleagues usually classify fistulas into 4 main anatomical categories as described in 1976 (3). 1) Intersphincteric; 2) trans-sphincteric; 3) supra-sphincteric and 4) extrasphincteric - this is situated entirely outside the sphincters and is now recognized not to be of cryptoglandular origin, but rather due to an intra-abdominal pathology or injury. Suprasphincteric and extrasphincteric fistulas should be referred to a colorectal specialist (4).

Clinical evaluation: The common presentation is mainly perianal suppuration and discharging sinuses. History of previous surgery and/or trauma should be ruled out initially. Also important is history of tuberculosis and any other special diseases like Crohn's disease, HIV infection, etc. Digital examination usually confirms the diagnosis of low-level fistula in ano. Procto-sigmoidoscopy is needed to confirm high-level fistula in ano (above the dentate line). Goodsall's rule is useful for anticipating the anatomy of a simple fistula. It is of little help in defining the anatomy of complex fistulas. Fistulas from hidradenitis suppurativa arise distal to the dentate line in anal skin, allowing their differentiation from cryptoglandular fistulas, which communicate with the dentate line and Crohn's disease, which may track to anorectum proximal to the dentate line (5). Perianal Crohn's disease is quite devastating because of its painful nature and threat to patient's continence (6).

Investigations: Fistulography is the most easily available and reliable investigation of choice. Endo-anal ultrasound is a useful investigation in complex fistulas. CT scan is useful in

extrasphincteric and retroperitoneal fistulas. MRI is emerging as investigation of choice in complex and recurrent fistulas.

**Treatment:** The aim of the fistula treatment is to remove the entire pathology from its root and to preserve anal continence. Various options are fistulotomy, fistulectomy, seton (,), fibrin glue, advancement flap, and coring and anal fistula plug.

**Complications:** The two most common complications are recurrence and incontinence. In our case, the patient presented with a very long unusual tract going into the posterior compartment of the thigh, which required wide opening of the entire tract and secondary suturing at a later date. The transsphincteric fistula had already set in previous fibrosis that helped in its easy excision.

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