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A complex Fistula-In-Ano presenting as an extension in Rt. iliac fossa: A Case study

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ABSTRACT -

Background - Systemic diseases like diabetes, hypertension etc are at higher risk of perianal diseases. A complex anal fistula, which is associated with diabetes are high complication rates and healing impairments. Treatment of fistula in ano depends on the location of the fistula, amount of anal sphincter involved in the fistula, and the underlying disease process. Prevention of recurrence and controlling the purulent discharge by surgical method are the definitive treatment of fistula in ano. Here, we present a complex case of Fistula in ano in uncontrolled diabetes mellitus patients which as an extension towards right iliac region and right inguinal region which was treated by surgical intervention.

Case presentation – a thirty-year-old diabetic male patient come to us for recurrent fistula in ano with swelling at right iliac and inguinal region. We do surgical intervention and discharged on 9th post operative day. A follow up examination of post operative wound was taken after 2 days interval respectively. After 3 months, fistula track was completely healed.

Conclusion: fistula in ano is a complex disease in diabetic patients and imposes challenges to the surgeon. Early diagnosis and appropriate management is the key to success. Proper assessment and mapping of the tract is very important before going in for a definitive surgery.

Keywords - Fistula in ano, ischiorectal abscess, extrasphicteric fistula, *Gudavidradhi*, *Bhagandara*.

1. Background -

Fistula in ano more common in patients with diabetes mellitus, Crohn's disease, and patients who are immune compromised for any reason[1]. A Fistula in ano is a track, lined by unhealthy granulation tissue, that connects deeply in the anal or rectum and superficially on the skin around the anus.[2] It usually occurs in a pre-existing anorectal abscess which burst spontaneously.[3] There are causes like infection of crypts of Morgagni gland and secondary to diseases like perianal abscess, ulcerative colitis, Crohn's disease, tuberculosis.[4]

These abscesses have several routes of spread, the most common of which are downward extension to the anoderm (perianal abscess) or across the external sphincter into the ischiorectal fossa. Less common route of spread are the supralevator space or in the submucosal plane. When the abscess is drained, either surgically or spontaneously, persistence of the septic foci may occur and lead to chronic fistula in ano[5].

In all individuals, definitive treatment of a fistula aims to control the purulent discharge and prevent its recurrence[8]. Treatment depends mainly on the trajectory of the fistula and the underlying disease leading to the fistula formation[9]. Simple inter-sphincteric fistulas can often be treated by fistulotomy (opening the fistulous tract), curettage, and healing by secondary intention. Extra sphincteric fistulas are rare, and treatment depends on both the anatomy of the fistula and its etiology. In general, the portion of the fistula outside the sphincter should be opened and drained. Liberal use of drains is helpful[10].

In this presented case, there was a rare extrasphicteric right perianal fistulous track traversing superiorly in right ischio rectal fossa and reaching upto right levator ani muscle and with associated muscle. It extends toward anterior abdominal wall in right iliac fossa and right inguinal region and presented as a large and chronic abscess and which was treated successfully with surgery.

In ayurvedic samhitas *Bhagandara* is one among the eight *mahagadas* by *acharya* sushruta and which is difficult to cure[6]. *Gudavidradhi* is one of the main cause of *Bhagandara* (fistula in ano). If it is not treated in time it may convert into *Bhagandara* as it finds its way into anal canal. Here patient had already undergoes *bhedanakarma* (incision and drainage), inspite of that his *Gudavidradhi* seen.

2. Case report –

A 30 year male patient was admitted under surgery department in July month, suffering from swelling and discharge from right ischio rectal region since 25 days. Patient also complaints of pain and swelling at right iliac region and right inguinal region.

His past medical history revealed a known diabetic mellitus and taking regular treatment since 2 years. Patient had no any history reveled of weight and appetite loss. There was no family history of associated clinical features.

Patient developed abscess on the right ischio rectal region 15 days ago and treated by surgical drainage and with antibiotics at OPD level in another hospital. But after few days of drainage patient develop fistula with large collection in pelvic region extends toward anterior abdominal wall in right iliac fossa.

On clinical examination there was an external opening present at 7'o clock position and pus discharge coming from opening. Also swelling and tenderness present at right iliac and right inguinal region. Mild local temperature also seen at swelling region and fluctuation test was positive. The result of digital examination was normal and the internal opening of the tract was not visualized.

MRI study reveal's extra sphincteric right perianal fistula noted with its external cutaneous opening at 7 o clock position and traversing superiorly in right ischio rectal fossa for a length of 10cm and reaching upto right levator ani muscle with associated muscle. There was collection noted along the tract, which extend towards anterior abdominal wall in right iliac fossa with multiple intercommunicating collections in muscular and subcutaneous plane.

The laboratory analyses including complete blood count which shows leukocytosis (Wbc- 17.800/mm^3) and rest blood biochemistry, erythrocyte sedimentation rate were within normal limits.

Diagnostic laparoscopy with incision and drainage with curettage of fistula tract was planned after physician fitness. Under spinal anesthesia, the patient was placed in lithotomic position and diagnostic laparoscopy was done initially. There was no any intra peritoneal communication or collection seen, adhesiolysis of mesentery done laparoscopically. Incision and drainage was done on right iliac region, Pus drained out and cavity irrigated. After curettage and scooping of external fistula tract, right inguinal cavity interconnects with right ischio rectal fossa and negative suction Romovac drain kept. The right iliac region wound sutured with absorbable and non absorbable sutures respectively. Following an uneventful post operative recovery, the patient was discharged on the 9^{th} post operative day. A follow up examination of post operative wound was taken after 2 days interval for more than 3 months respectively. After 3 months, fistula track was completely healed and no recurrence found.

3. Discussion-

Perianal fistula is a problematic disease in surgery. Fistula in ano is an inflammatory track which has an external opening in the perianal skin and an internal opening in the anal canal or rectum. This track lined by granulation tissue and fibrous tissue.[4]

Anal fistulas are divided into 4 categories, with the extrasphicteric category being the rarest and representing approximately 1% of total number of fistulas. Extra sphincteric fistulas are rare, and treatment depends on both the anatomy of the fistula and its etiology. In general, the portion of the fistula outside the sphincter should be opened and drained. Liberal use of drains is helpful. In above case patient developed pelvirectal

abscess prior to extrasphicteric fistula. Pelvirectal abscess situated between upper surface of Levator ani muscle and pelvic peritoneum and if not treated early, it causes fistula formation.[5]

The treatment of complex anal fistulas is one of the most challenging aspects of coloproctology and colorectal surgery. In the presented case; the MRI of the patient delineated an extra sphincteric type of fistula with evidence of communication to the right iliac region and anterior abdominal wall.

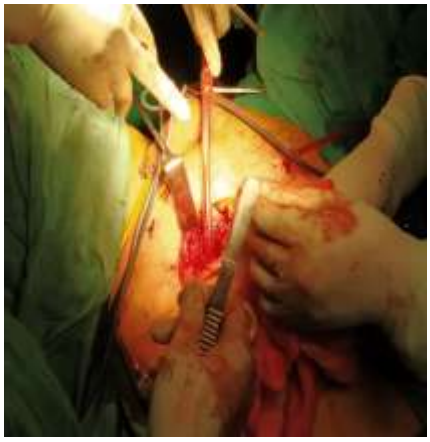
It seems like Fistula in ano are more common in patients with diabetes mellitus, Crohn's disease, and patients who are immune compromised for any reason. The complexity of the present case is aggravated by the fact that the patient was diabetic. Infectious diseases like abscess, cellulites prevalent in individuals with Diabetes mellitus. The main pathogenic mechanisms are: hyperglycemic environment increasing the virulence of some pathogens; reduced chemotaxis and phagocytic activity, immobilization of polymorphonuclear leukocytes; glycosuria[11].

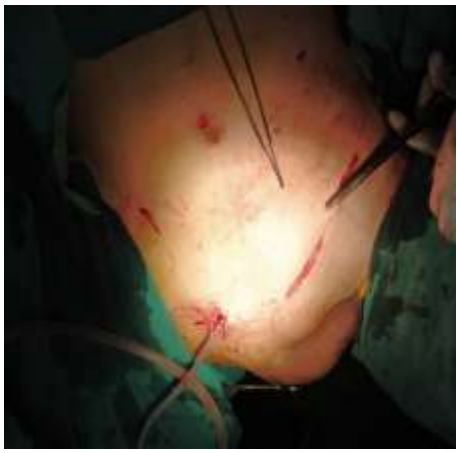
Gudavidradhi is one of the main cause of *Bhagandara* (fistula in ano). If it is not treated in time it may convert into *Bhagandara* as it finds its way into anal canal[12]. Here patient had already undergoes *bhedanakarma* (incision and drainage), inspite of that his *Gudavidradhi* seen.

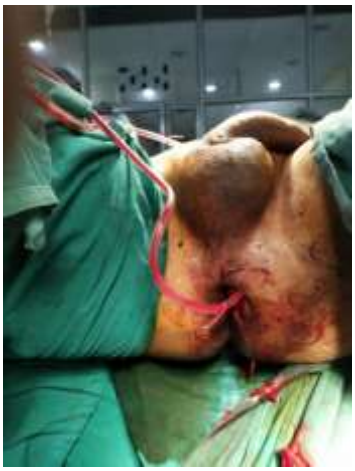
Conclusion: perianal abscess is the main cause of fistula in ano, which is a complex disease in diabetic patients and imposes challenges to the surgeon. As in fistula in ano there may be improper hygiene, improper dressing and improper drainage of the abscess. Early diagnosis and appropriate management is the key to success. Proper assessment and mapping of the tract is very important before going in for a definitive surgery.

Preoperative photos

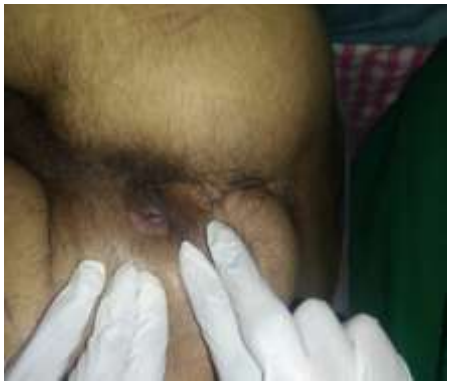
Intra-operative photos:

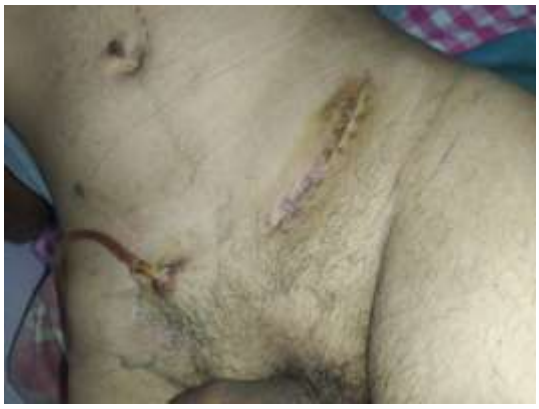






Post operative photos (after 2 months)





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