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Original research article

A fistula's Prevalence and Management in Patients with Chronic Anal Fissure (CAF)

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Abstract

Background: Anal Fissure and Fistula can be hard to ignore, particularly with symptoms such as itchiness or pain and bleeding in the rectal area. Anal fistula is a pathological connection between the anal canal and perianal skin, which most commonly develops from an infected anal crypt.

Aim: To search for the prevalence and treatment of a fistula in patients with chronic anal fissure (CAF).

Method: We started to look the presence or absence of any local sequels in 73 patients around the fissure in consecutive patients with CAF. The duration of symptoms and a history of previous abscess formation and/or drainage were asked in detail. In patients with fissure-fistula, fistulotomy/ fistulectomy was first performed because this part of the operation necessitated division of some of the IAS in some cases. The patients were examined on the 8th postoperative day, 1 month & 6 months postoperatively.

Results: Patients who underwent surgery for anal fistula were analyzed. Of the 73 patients (aged 18-60 years), 47 (64.38%) were males and 26 (35.62%) were females. 46 (63%) patients were treated with LIS only; 18 patients (24.66%) were treated with LIS + sentinel pile excision and 9 (12.34%) were treated with LIS + fistulotomy with/without abscess drainage.

Conclusion: It is the determinant of CAF in the success of the treatment of anal fistula developing on the basis of CAF. Adequate sphincterotomy is successful in the treatment of CAF and anal fistula developing on the fissure background.

Keywords: fistula, fistulotomy, sphincterotom

Introduction

Fissure is a medical term referring to the tearing of the skin, whereas fistula is abnormal tube-like connections or passages between organs. There can be different causes of anal fissures. These include rectum cancer, vaginal childbirth, anal sex, prolonged diarrhoea, etc. In most of the cases, the reason behind fissure occurring is strained bowel movement or continuous constipation. It causes tearing down of the muscles that control the sphincters to the anal canal or inner rectum.

Anal fistula is an abnormal passage that forms from the anal canal to the skin near the anus. With this condition, the canals are connected to the infected glands through tunnels being formed under the skin. Usually, fistulas result from existing or previous abscesses. A single fistula tract can potentially create many openings. Hence, if treatment is not done, one fistula can cause more complex fistula to develop.

Generally, fissures can get cured in a few days or few weeks, often without even needing any treatment. They are not known to cause much complication. Contradictory to that, leaving

fistulas untreated can result in complications. That is why it is essential to identify the symptoms you are experiencing and avail treatment accordingly [1].
CAF has traditionally been defined with a triad of a sentinel pile (external skin tag), a hypertrophied anal papilla, and a deep ulcer. Gupta reported that out of the 283 patients, 146 had sentinel tags, and 7 had post fissure granuloma or fistula [2].

Methods:
The present study was conducted at department of General Surgery, Anugrah Narayan Magadh Medical College, Gaya, and Bihar, India for 1 year. The sample size was calculated using the formula:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where n_0 is the estimated sample size; e is the desired level of precision (i.e. the margin of error); let's say we want 95% confidence, and at least 5 percent—plus or minus—precision. A 95 % confidence level gives us Z values of 1.96, per the normal tables. According to many studies till now, prevalence for anal fistulas is very less, i.e. approximately 5%. So we get $[(1.96)^2 (0.05) (0.95)] / (0.05)^2 = 73$.

We started to look and note the presence or absence of any local sequels around the fissure in 73 patients coming to the hospital with anal fissure. The duration of symptoms and a history of previous abscess formation and/or drainage were asked in detail. Sentinel pile was defined as a single, nodular skin lesion of more than 3-4 mm adjacent to the fissure edge, differentiating it from the common elevated, oedematous borders of CAF

In patients with fissure-fistula, fistulotomy/ fistulectomy was first performed because this part of the operation necessitated division of some of the IAS in some cases. As we performed sphincterotomy in a spasm-controlled manner, the anal caliber was checked after fistula surgery and the operation proceeded with lateral internal sphincterotomy (LIS) if needed [3]. For an abscess, concomitant fistulotomy with incision and drainage was again done as the first step. Sentinel piles were excised with the cut mode of the electro cautery following LIS.

The patients were examined on the 7th postoperative day, at 1 month and 6 months postoperatively. Objective healing was defined as complete epithelization of the fissure base and if present, all raw areas created by sentinel pile excision or fistulotomy. Time of relief of pain and complications were also analyzed in the group of patients who underwent surgery. At 6 month's follow up, successful clinical outcome was defined as the lack of anal symptoms and objective healing of the fissure.

Results:
Of the 73 patients (aged 18-60 years), 47 (64.38%) were males and 26 (35.62%) were females. 46 (63%) patients were treated with LIS only; 18 patients (24.66%) were treated with LIS + sentinel pile excision and 9 (12.34%) were treated with LIS + fistulotomy with/without abscess drainage.

Parameters	LIS only (n=46)	LIS + sentinel pile excision (n=18)	LIS+fistulotomy with/without abscess drainage (n=9)
Age (in years)	29.62±19.43 (19-51)	33.83±11.25 (21-46)	38.5±5.21 (33-41)
Male/ Female	29/17	11/7	7/2
Duration of symptoms (in months)	27.04±25.29 (2-54)	14.76±9.25 (4-30)	21.59±15.52 (7-40)
Time of relief in pain (in days)	2.65±1.06 (1-4)	2.15±0.97 (1-4)	4.47±2.62 (2-7)
Objective healing at 1 month (%)	93.4	89.7	73.6
Objective healing at 6 months (%)	97.9	94	99.5

Of the 73 surgically treated patients, 46 (63 percent) underwent LIS (LIS-only group) as no additional sequels were detected. Two cases had bleeding that required additional hemostasis. Time of relief of pain was 2.65±1.06 days. Objective healing was achieved in 43 (93.4 percent) of the patients at one month's follow up and in 45 (97.9 percent) at six months. At 6 months, all the rests were healed but a single patient developed recurrence.

Of the 73 patients who underwent surgery, 18 (24.66 percent) had sentinel piles. Sentinel piles were removed with their will and consent (LIS+ sentinel pile excision group).

Nine patients (12.34 percent) had fistula formation at the fissure base, all on the posterior midline. Seven of the nine fissure/ fistula/abscess patients were male (77.78 percent) and two were females (22.22 percent). Only one of the fissure-fistulas was detected intraoperatively. All fissure-fistulas were treated with fistulotomy and LIS.

Discussion:

Corman stated that "Infection and abscess may develop around the fissure and in some cases, superficial fistula may develop" [4]. There can be different causes of anal fissures. These include rectum cancer, vaginal childbirth, anal sex, prolonged diarrhoea, etc. In most of the cases, the reason behind fissure occurring is strained bowel movement or continuous constipation. It causes tearing down of the muscles that control the sphincters to the anal canal or inner rectum.

Unlike fissures, anal fistulas aren't tears. Instead, anal fistula is an abnormal passage that forms from the anal canal to the skin near the anus. With this condition, the canals are connected to the infected glands through tunnels being formed under the skin. Usually, fistulas result from existing or previous abscesses. A single fistula tract can potentially create many openings. Hence, if treatment is not done, one fistula can cause more complex fistula to develop.

Some symptoms commonly associated with anal fissure include pain caused during bowel movement in the anal region. It is usually accompanied by a constant burning or itching sensation in and around the anus along with bloody stool. There are usually visible cracks and tears around the anal region as well.

Anal fistula comes with the symptom of throbbing pain in the anal region, which usually develops to be more painful over a period of time. There might also be redness and swelling around the anus, along with irritation of skin, pus and blood discharge, or even fever at times. Symptoms like these make it uneasy and difficult to sit down for long periods as well [1].

The most effective way to treat anal fistula and fissure is to opt for surgical options that completely cure the condition. Having said that, if the condition is diagnosed early, certain medications such as antibiotics, antipyretics and analgesics can be helpful. The most suitable treatment option can vary from individual to individual. It also depends on the type, location, severity and size of the fissure or fistula. Likewise, the recovery period can vary as well. In patients with fissure-fistula, fistulotomy/ fistulectomy was first performed because this part of the operation necessitated division of some of the IAS in some cases. As we performed sphincterotomy in a spasm-controlled manner, the anal caliber was checked after fistula surgery and the operation proceeded with lateral internal sphincterotomy (LIS) if needed [3]. For an abscess, concomitant fistulotomy with incision and drainage was again done as the first step. Sentinel piles were excised with the cut mode of the electro cautery following LIS.

In line with previous studies [5], we found men to be more frequently affected by anal fistula than women. This is attributable to the substantially higher prevalence of anal abscesses in men [6]. In our study also, men were mostly affected by anal fistula as compared to women.

In this study, (63%) patients were treated with LIS only; 18 patients (24.66%) were treated with LIS + sentinel pile excision and 9 (12.34%) were treated with LIS + fistulotomy with/without abscess drainage. Infected anal crypt glands as a cause for subcutaneous perianal fistula are supported by Golligher [7]. Fissure-in-anus as a cause for subcutaneous fistula is clearly described by both Golligher [7] and by Thomson et al [8].

Conclusion:
Patients with CAF harbour a coexistent abscess or fistula around the fissure. This fact, which may sometimes be disguised, needs to be seriously considered by practitioners. The importance of making a clear etiological diagnosis is not an academic exercise. It enables the proctologist to treat the fissure appropriately in these cases, which should include a sphincterotomy. Fistulectomy alone will not relieve the painful symptoms. These are the conditions that can't be treated through changes in diet. However, incorporating healthy dietary changes promotes healthy bowel movement. This reduces the risk of diarrhoea or constipation, which might result in fissures. Preventing the condition is always better than curing it. If you notice any symptom of fissure or fistula, get medical attention as soon as possible.

Controlled studies are needed to confirm our findings, as well as to define the possible impact of these secondary lesions on successful treatment.

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