Section: General Surgery

Original Research Article

IS THERE A BENEFIT TO ANAL ADVANCEMENT FLAP (VY PLASTY) SURGERY OVER MORE TRADITIONAL/CONVENTIONAL SURGICAL METHODS FOR TREATING CHRONIC ANAL FISSURES ?: A RETROSPECTIVE OBSERVATIONAL STUDY

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Abstract

Background: An anal fissure is a linear tear in the skin of the distal anal canal below the dentate line. It is a common condition affecting all age groups but particularly common in young adults; men and women are equally affected. The aim of this study was to evaluate the efficacy of a sphincter saving procedure- anal advancement flap in the treatment of CAF. **Materials and Methods:** This observational study was carried out on 20 patients of anal Fissure from October 2019 to October -2021 in our institute All patients with chronic anal fissures regardless of their previous management underwent V-Y advancement flap. Patient demographics, symptom duration, previous treatments, short-term postoperative outcome and long-term follow-up were recorded. **Result:** The mean age of the patients was 42.3 ± 7.87 years. It was found that the 16 (80%) patients were having Pain during defecation followed by 14 (70%) were having Bleeding Per rectum, wound in perianal region, Itching/ Burning. The piles were present in 6 (30%) patients. Previous treatment such as Hemorrhoidectomy was done in 6 (30%) patients while Sphincterotomy was done in 3 (15%) patients. During P/R and Proctoscopy examination, it was found that tenderness and skin tag were found in 15 (75%) and 10 (50%) patients. While position of fissure was 12 O'clock found in 12 (60%) patients then 6 O'clock in 5 (25%) patients. In our study, 4 out of 20 patients suffered from complication of Advancement V-Y flap surgery. Edema and discharge were encountered in 4 patients each. 3 patients suffered from infection while 2 patients had flap displacement. None of our patients had stenosis, recurrence or Incontinence. Discharge from the surgical site which was most common between 3rdand 4thday was found to be a significant complication seen in 4 (20%) patients. Amongst these 3 (75%) developed Infection (day 5th- 6th) and 2(50%) developed flap displacement (day 7th- 8th). **Conclusion:** Regardless of sphincter pressures, prior treatments, or the severity of the illness, we have demonstrated good healing rates for chronic anal fissures treated with an anal fissure advancement flap. These findings demonstrate that the procedure can be successfully employed as the main treatment for all chronic fissures.

INTRODUCTION

Anal fissure is a linear split or breach in the lining of the transition zone between the skin and mucous of the anal canal. It has an elliptical form, with its major axis vertical and a size of around 0.5–2.5 cm.[1] Fissures are classified as acute or chronic. Acute fissure tends to heal spontaneously with topical steroids, local anesthetics and bulk laxatives within 6 weeks and looks similar to paper.[1] The

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chronological definition is rather loose, but most surgeons regard persistence beyond 6 weeks as a reasonable time when an acute fissure, unlikely to heal with conservative treatment, may be considered chronic.[2] Morphologically, the presence of visible transverse internal anal sphincter fibers at the base of a fissure indicates chronicity and provides a more clear-cut definition. Associated features include indurated edges, a sentinel pile and a hypertrophied anal papilla. Chronic anal fissure (CAF) is usually associated with internal anal sphincter (IAS) hypertonia, the relief of which is considered central to promote fissure healing.[3] First-line treatment of CAF to decrease hypertonia of the internal anal sphincter is medical. After pharmacological sphincterotomy, the healing rate of CAF ranges from 30 to 96 %, whereas transitory minor incontinence for flatus and soiling has been reported in a few cases. Surgical treatment generally recommended is lateral anal sphincterotomy that seems to be the maneuver of choice after the failure of conservative treatment resulting in success rates above 95%.[4] However, it may cause incontinence. As indicated by Nelson in a systematic review of randomized surgical trials, after sphincterotomy the overall risk of incontinence is about 10 %, mostly to flatus without any specification of the duration of this problem (transitory or permanent).[5] However, it is a common belief that the risk of permanent incontinence is about 1 %. Nonetheless, this does not take into account the normal weakening of the sphincter with age and the possibility of future anorectal surgery, radiation or obstetrical trauma. Therefore, the risk of incontinence after lateral internal sphincterotomy should be taken into account looking at the life span of the patient. Fissurectomy is the procedure most used to preserve the integrity of anal sphincters, although it has been rarely used alone. In fact, the possible complication of keyhole defect that may lead to fecal soiling limits its use.

MATERIALS AND METHODS

This Retrospective observational study was carried out on 20 patients of anal Fissure from October 2019 to October -2021 at Department of General Surgery, Parul Institute of Medical Sciences & Research, Parul University, Vadodara, Gujarat, India.

At the time of admission a detailed history with previous treatment and necessary clinical examination were carried out. Each of the individual study subjects was contacted in person by Investigator and data collection/clinical examination was done.

Recorded information from case record form will be coded and entered in Microsoft excel worksheet. Data will be analyzed with due age distribution, sex distribution, diagnosis made during procedure and complaint of patients relieved or not after definite procedure.

Inclusion Criteria

Patients having fissure in ano for at least 6 weeks. Patients having unrelieved symptoms with conservative management. Patients fit for anesthesia. Patients having no associated perianal co morbidities.

Exclusion Criteria

Patient having acute fissure in ano. Patient having 1st attack of pain during defection, Patient having painful defecation from any other cause other than fissure in ano like piles, Patients with coagulation defects, Patients with critical illness. Medically unfit for surgery and patient unwilling for surgery were excluded from surgery.

RESULTS

The total number of patients included in this study were (n=20).

Highest no of patients as 6(30%) from 40-45 years of age group and followed by 6(30%) from 46-50years age group.

The lowest age of patient was 31 years and highest age of patient was 56 years.

The mean age of the patients was 42.3 ± 7.87 years.

It was found that the 15 (75%) patients were Female followed by 5 (25%) were male. The ratio of Female: Male was 3:1.

According to Symptoms wise distribution, it was found that the 16 (80%) patients were having Pain during defecation followed by 14 (70%) were having Bleeding Per rectum, wound in perianal region, Itching/ Burning. The piles were present in 6 (30%) patients. [Table 1]

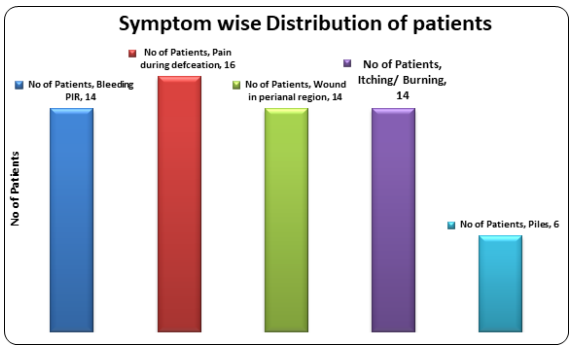

Figure 1: Showing Symptoms wise distribution of Participants

Previous treatment such as Hemorrhoidectomy was done in 6 (30%) patients while Sphincterotomy was done in 3 (15%) patients.

During general examination, it was found that 12 (60%) of the patients wereobese. Out of which 4 (33.3%) suffered from complication in form of Edema, Discharge from Wound and subsequent Infection.

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During P/R and Proctoscopy examination, it was found that tenderness and skin tag were found in 15 (75%) and 10 (50%) patients.

While position of fissure was 12 O'clock found in 12 (60%) patients then 6 O'clock in 5 (25%) patients. [Table 2]

Post operative outcome was studied on seven predefined parameters. In our study, 4 out of 20 patients suffered from complication of Advancement V-Y flap surgery. Edema and discharge was encountered in 4 patients each. 3 patients suffered from infection while 2 patients had flap displacement. None of our patients had stenosis, recurrence or Incontinence. Discharge from the surgical site which was most common between 3rd and4thday was found to be a significant complication seen in 4 (20%) patients. Amongst these 3 (75%) developed Infection (day 5th- 6th) and 2(50%) developed flap displacement (day 7th- 8th). [Table 3]

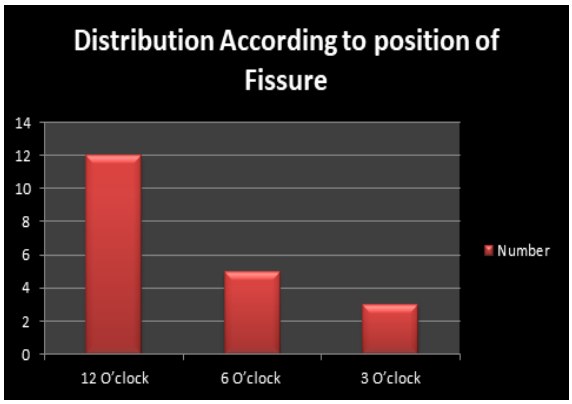

Figure 2: Graphical Distribution of participants according to position of fissure.

Table 1: Distribution of Participants Based on their Symptoms.

Symptom	Number (Percentage)
Pain during defecation	16 (80%)
Bleeding Per Rectum, wound in perianal region, Itching/ Burning	14 (70%)
Piles	6 (30%)

Table 2: Distribution of participants according to position of fissure.

Position of Piles	Number (Percentage)
12 O'clock	12 (60%)
6 O'clock	5 (25%)
3 O'clock	3 (15%)

Table 3: postoperative outcome and complication

Post operative outcome	No of patients (Percentage)
Edema	4 (20%)
Discharge	4 (20%)
Infection	3 (15%)
Flap Displacement	2 (10%)
Stenosis	0(%)
Recurrence	0(%)
Incontinence	0(%)

The VAS Score in our study at time of admission was 7.50 ± 0.51(severe pain) and after V-Y plasty, at discharge time was 2.6 ±0.50 and Difference among them was found to be higly significant. (mild pain). [Table 4]

Table 4: Showing comparison of VAS score of patient at Admission time and at Discharge from hospital time

	VAS Score	P Value
On Admission	7.50 ± 0.51	<0.0001*
On discharge	2.6 ±0.50	

(P Value less than 0.01 Significant)

DISCUSSION

The pathogenesis of chronic anal fissure is poorly understood. In the past it was believed that the passage of a hard stool traumatized the anal mucosa. Although a plausible initiating factor, this does not explain why only one in four patients reports constipation and the onset of symptoms follows a bout of diarrhoea in 4 to 7% of instances. A dietary association may exist as people taking a diet low in fibre appear to be at increased risk of developing anal fissures. There may be more than one pathogenic process leading to the development of chronic fissures.[7,8]

The majority of anal fissures are probably acute and resolve either spontaneously or with simple dietary modification to increase fibre and laxatives where appropriate. The distinction between acute and chronic fissures is an arbitrary one, but fissures failing to heal within 6 weeks despite straightforward measures are generally designated as "chronic".[9] Although a proportion (less than 10%) of these chronic fissures will eventually resolve with conservative measures, most will require further intervention in order to heal. Fissures

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are usually single and posterior midline fissures are most common, but 10% of women and 1% of men have fissures in the anterior midline. Women who develop symptoms after childbirth usually have anterior fissures. Multiple fissures or those in a lateral position on the anal margin raise suspicion as there may be underlying inflammatory bowel disease, syphilis, or immunosuppression including HIV infection. However, it is important to recognize that most fissures arising in patients with inflammatory bowel disease are posterior and are also painful in at least one half of cases. Similarly, fissures that are resistant to treatment should prompt further investigation.[10]

In our study, 12 o'clock position was the most common encounterdpostion of the fissure (60%) which is consistent with the finding of study done by Patti R et al 11(61.5%).The more common 12 o'clock postion of fissure in our study can be attributed to the fact that study had more number of female patients in whom anterior fissure is most common.

Discharge in20% of patients was consistent with Egazi T et al,[12]which also had 20% patients suffering from discharge in comparison to Giordano Pet al,[13]which had only 7.84% patients suffering from same.

Flap displacement (cut through of stiches) 10% in our study was consistent with Egazi T et al,[12]also having 10% patients suffering from same. Many other studies had much less displacement least common in Singh et al,[14] 4.76%. The higher occurrence of flap displacement in our study can be attributed to prolonged and persistent discharge from wound.

Infection was encounted in 15% of patients consistence with Patti R et al,[11]which had 10.4% infection rates. High rates of infection in our study is attributed to discharge from wound which became to purulent over the course of hospital stay.None of our patients had incontinence for feces beholding the fact of V-Y plasty being a sphinctersaving procedure. At the follow up of our first month, none of our patients had recurrence or any evidence of stenosis.

The VAS Score in our study at discharge was significant improvement from admission from 7.5 (severe pain) to 2.6 (mild pain)at follow –up. This finding coincided with the study Pasquale Giordano et al which evaluated VAS Score at 24 hours and score was found to be 1.[13]

CONCLUSION

Regardless of sphincter pressures, prior treatments, or the severity of the illness, we have demonstrated good healing rates for chronic anal fissures treated with an anal fissure advancement flap. These findings demonstrate that the procedure can be successfully employed as the main treatment for all chronic fissures.

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