ORIGINAL ARTICLE

Comparison of Outcome of Lateral Sphincterotomy with Anal Advancement Flap in Patients of Anal Fissure

SHAHID HUSSAIN, ASIYA SHABBIR

ABSTRACT

Aim: To compare the outcome of lateral sphincterotomy with Anal Advancement Flap in patients of anal fissure.
Duration: The study was conducted from 01-01-2015 to 31-12-2015.
Settings: Department of Surgery, Bahawal Victoria Hospital, Bahawalpur.
Results: In our study, mean age was calculated as 36.45+9.68 and 38.61+9.77 years respectively, 45(56.25) in Group-A and 46(57.5%) in Group-B were male while 34(43.75%) in Group-A and 34(42.5%) in Group-B were females, comparison of outcome of lateral sphincterotomy with anal advancement flap in patients of anal fissure shows that 10(12.5%) in Group-A and 3(3.75%) in Group-B had infection, p value was calculated as 0.01 while anal incontinence was recorded as 14(17.5%) in Group-A and 2(2.5%) in Group-B, p value was calculated as 0.001.
Conclusion: We concluded that outcome of anal Advancement flap is significantly better when compared with lateral sphincterotomy in treatment of chronic anal fissure in term of less infection and anal continence.

Keywords: Anal fissure, lateral sphincterotomy, Anal Advancement Flap, outcome

INTRODUCTION

Anal fissure is painful condition and associated with per rectal bleeding and painful defecation. The acute anal fissure is defined as a radial split in the anoderm which extends from the anal verge with variable proximally distance towards the dentate line. Chronic anal fissures are known as fail to heal and form linear indurated ulcers. The pathogenesis of this condition is due to various factors including sphincter spasm, mechanical trauma, and ischemia[1]. The prevalence of this condition is around 30–40% of total ano-rectal cases whereas the prevalence is supposed to be common in people suffering with constipation especially once who pass hard and dry stool[2].

The advantage of current conservative management is application of topical pharmacological agents which relax the internal sphincter. It reduces spasm and pain is relieved while the increased vascular perfusion promotes in healing of the ulcer.

These agents include diltiazem 2% and glyceryl trinitrate 0.2%[3]. When conservative management is failed, a surgical approach becomes inevitable for the definitive management of this condition[4].

Lateral internal sphincterotomy may be adopted without pharmacologic treatment failure, these practice parameters are used by the American Society of Colon and Rectal Surgeons[5]. This technique remains the gold standard for ultimate management of anal fissures, the rate of healing after sphincterotomy ranges from 92% to 100%, where most of the fissures are healed within two months but having a risk of incontinence[6,7].

The anal advancement flap is an effective method for healing of anal fissure as primary line of management, it is considered as a good choice for those cases having recurrent anal fissures. This technique can be applied to those with chronic anal fissures with success as a primary therapy considering its excellent and rapid rates of healing with rapid relieve in pain and minor complications[1].

In routine practice, lateral internal sphincterotomy is being used for the management of chronic anal fissure while the local data is limited on this issue. However, this study may be helpful for creating awareness regarding the use of anal advancement flap.

METHODOLOGY

A total of 100 cases (50 in each group) between 15yrs to 60 yrs of either gender, with chronic anal fissure were included in the study, we excluded those cases having any other perianal diseases.(hemorrhoids, fistula or abscess), presented with acute anal fissure (less than 2 to 3 weeks) and those who had undergone previous surgical procedure in the anal canal.

After taking hospital ethical committee approval, patients coming through OPD of Surgery, Bahawal Victoria Hospital, Bahawalpur. An informed consent

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Department of Surgery, Bahawal Victoria Hospital, Bahawalpur
Correspondence: Dr. Shahid Hussain, Assistant Professor, Email: ssc.bwp@gmail.com

of the patients was taken from them. All the patients were randomly divided into two groups by using computer generated number table. Group A patients underwent lateral sphincterotomy and group B patients underwent anal advancement flap procedure for chronic Anal Fissure.

Lateral sphincterotomy was performed in regional anesthesia in the lithotomy position by a standard open technique, briefly; a 5mm incision was made into the perianal skin along the intersphinteric groove. The internal anal sphincter was then dissected and a segment withdrawn with a pair of artery forces and divided with diathermy to the level of the dentate line.

The anal advancement flap was performed by making a V-shaped incision from the edges of the fissure extending about 4 cm from the anal verge and away from the midline. The V-shaped flap formed of skin and subcutaneous fat was mobilized sufficiently to allow advancement into the anal canal to cover the fissure defect. Care was taken to preserve enough pedicles to ensure adequate blood supply. The base of flap was sutured to the lower anal mucosa. Both of these procedures were performed by my supervisor. Wound infection was assessed as per operational definition 3rdpost-operative day of treatment and anal incontinence was assessed after 3 months of treatment.

RESULTS

The common age of the patients was recorded as 37.32±6.26, 54% in Group-A and 60% in Group-B were male and remaining 46% in Group-A and 40% in Group-B were females.

The infection was recorded in 5(10%) in Group-A and 1(2%) in Group-B(P<0.05). Anal incontinence was recorded in 8(16%) in Group-A and 2(4%) in Group-B, (P<0.05), both of these variables were significantly lower in cases managed with anal advancement flap as compared to those without it.

Table 1: Comparison of outcome of lateral sphincterotomy with anal advancement flap in patients of anal fissure (n=100)

Outcome	Group-A (n=50)	Group-B (n=50)	P value
Infection	5(10)	3(6)	<0.01
Anal incontinence	8(16)	2(4)	<0.01

DISCUSSION

The findings of our study are supported with previous studies recorded that post-operative infection with anal advancement flap as 0%[1] and 7.5%[2] in those cases without it, anal incontinence with anal advancement flap was 0% with lateral sphincterotomy, it was around 20% after 3 months of treatment[8].

Flap anoplasty procedures are also used for the management of chronic anal fissures and involve fashioning a local flap to cover the fissure defect. As the flap procedures do not involve disruption of the internal anal sphincter, they are particularly beneficial in cases with normal anal pressures or in fissures secondary to obstetrical trauma where there is often associated internal sphincter disruption. A study using a rotation flap achieved 81% healing rate with an 11.8% flap failure rate and 0 percent incontinence rate[9]. A second study using a V-Y advancement flap achieved a 98% healing rate with a flap dehiscence rate of 5.9% and 0 percent incontinence rate, but with a recurrence rate of 5.9% of new fissures at new locations[10].

In early postoperative period, 55% of patients scored 0, 33% scored as mild incontinence, 9% had moderate incontinence, and 3% had severe incontinence. At the time of last follow-up, however, the numbers had improved, with 89% of cases being totally continent (0), 6.5% having mild incontinence, >6 3.7% with mild incontinence, and only 0.8% having fecal incontinence that was scored as severe. Considering the fact that the majority of incontinence episodes were not severe was also reflected in the quality-of-life assessment after anal advancement flap. Although in the early postoperative period 3.3%, 3.7% and 1% of patients replied that their social, physical, and sexual lives, respectively, were affected as a result of fecal incontinence after surgery, less than 1% of these cases had their lives affected by incontinence at the time of answering the questionnaire.

Finally, we are of the view that "anal Advancement flap is better procedure than lateral sphincterotomy in treatment of chronic anal fissure in term of less infection and anal continence", however, some-other trials are also require to validate this hypothesis.

CONCLUSION

We concluded that outcome of anal Advancement flap is significantly better when compared with lateral sphincterotomy in treatment of chronic anal fissure in term of less infection and anal continence.

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