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ORIGINAL RESEARCH

Assessment of efficacy of marsupialization on Fistulotomy wound edges among patients with simple perianal fistula

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ABSTRACT

Background: A perianal fistula is a condition characterized by an abnormal connection between the skin around the anus and the anal canal or rectum. Hence; the present study was conducted for assessing the efficacy of marsupialization on Fistulotomy wound edges among patients with simple perianal fistula. **Materials and Methods:** 100 patients with simple peri-anal fistulas underwent fistulotomy, with Group A receiving the procedure without marsupialisation and Group B with marsupialisation. The study focused on patients with simple non-recurrent perianal fistulas falling under ASA I and II, excluding cases with secondary or complex fistulas, anal incontinence, prior anal surgeries, or factors influencing wound healing. Statistical analysis was conducted using the SPSS program. **Results:** Group A, which underwent fistulotomy, had a significantly shorter operative time compared to group B, which underwent fistulotomy and marsupialization. Late postoperative pain at one week was significantly better in group B. There were no significant differences between the groups in terms of complications such as bleeding, incontinence, and urine retention. **Conclusion:** Marsupialization of the skin edges of anal fistulotomy wound, despite potentially increasing surgical duration, significantly improves wound healing and reduces long-term postoperative pain without elevating the risk of other complications.

Keywords- Marsupialization, fistulas, perianal

INTRODUCTION

A perianal fistula is a condition characterized by an abnormal connection between the skin around the anus and the anal canal or rectum. It is believed to stem from inflammation, often originating in one of the rudimentary anal glands.[1,2]The treatment of fistulas is challenging due to the risk of recurrence and potential damage to the anal sphincter, which can result in soiling and fecal incontinence (FI).[3]

While fistulotomy, which involves laying open the tract, is often considered the most effective treatment, postoperative incontinence rates have been reported to range from 4% to 62%, with an average occurrence of around 13%. For high and complex fistulas, procedures like the mucosal advancement flap are advised as they are less likely to impact the continence mechanism compared to fistulotomy. Primary fistulotomy and cutting setons are associated with the same incidence of GI depending on the complexity of the fistula, ranging from 25.2 to 67%.[5,6] The preferred surgical options for treating simple perianal fistulas are fistulotomy, with fistulectomy being a secondary choice.[7-9] Both procedures have shown excellent surgical outcomes in terms of continence, wound healing, and recurrence rates. After fistulectomy, complete wound healing typically occurs within 6 to 8 weeks, while fistulotomy tends to heal in 4 to 6 weeks. Utilizing sucralfate ointment has been found to expedite wound healing and reduce recurrence rates.[10] Additionally, marsupialization of the fistulotomy wound has been demonstrated to reduce wound healing time, improve postoperative pain management, and enhance wound drainage outcomes.[8]Hence; the present study was conducted for assessing the efficacy of marsupialization on Fistulotomy wound edges among patients with simple perianal fistula.

MATERIALS AND METHODS

The present study was conducted for assessing the efficacy of marsupialization on Fistulotomy wound edges among patients with simple perianal fistula. 100 patients with simple peri-anal fistulas underwent fistulotomy, with Group A receiving the procedure

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without marsupialisation and Group B with marsupialisation. The study focused on patients with simple non-recurrent perianal fistulas falling under ASA I and II, excluding cases with secondary or complex fistulas, anal incontinence, prior anal surgeries, or factors influencing wound healing.Fistulotomy was conducted under spinal anesthesia, involving identification of the internal opening, probing, and diathermy-assisted exposure of the fistulous track. Group B underwent marsupialisation of wound edges by suturing them to the track floor using absorbable sutures. Postoperative care comprised non-adherent dressings with local anaesthetic cream and analgesics as required. Statistical analysis was conducted using the SPSS program.

RESULTS

The study included 100 patients, with 50 in each group (Group A and Group B). There were 32 males and 18 females in Group A while there were 33 males and 17 females in Group B. The most common presenting symptoms in both groups were discharge, pruritus, and anal pain, with average durations of presentation being 14.9 months in Group A and 13.7 months in Group B.

Table 1: Demographic clinical and pathological data

		Group A	Group B	P value
Gender	Male	32	33	0.52
	Female	18	17	
Age		35.3	36.1	0.22
Presentation	Discharge	26	28	0.11
	Pruritus	13	15	0.32
	Pain	5	7	0.71
Duration		14.9	13.7	0.65
Pathologic type	Low trans-sphincteric	32	31	0.46
	Intersphincteric	18	19	

In this study, group A underwent surgery with a mean operative time of 19.2 minutes, while group B had a mean operative time of 26.1 minutes, with a statistically significant difference between the groups. Pain severity was assessed using the visual analogue scale (VAS) after 24 hours, with mean values of 6.3 in group A and 6.6 in group B. After one week, the VAS findings were 3.3 in group A and 0.7 in group B, showing a highly significant difference in pain measurement between the groups. Complications did not differ significantly between the groups. The primary outcome, wound healing time, was significantly different between the groups, with group A healing in 48.3 days and group B in 39.1 days. No removal of marsupialisation stitches was required in either group.

Table 2: Operative and follow up data

		Group A	Group B	P value
Operative time		19.2 minutes	26.1 minutes	<0.001*
V.A.S value	After 24 hours	6.3	6.6	0.5
	After 1 week	3.3	0.7	<0.001*
Complication	Bleeding	2	0	0.13
	Urine retention	2	1	0.49
	Incontinence	1	0	0.31
Healing time		48.3 days	39.1days	<0.001*

*: Significant

DISCUSSION

The treatment for a fistula depends on etiology. Several studies have explored various methods to improve the healing of surgical wounds following fistula surgery.[10- 12] Gupta et al.[12] demonstrated the safety and efficacy of topical sucralfate in promoting mucosal healing and providing a soothing effect post-anal fistulotomy. Chen et al.[11] reported that silicate-based wound dressings notably accelerated wound healing after anorectal surgery. Previous investigations into marsupialization of fistulotomy wound edges have shown a reduction in the duration required for complete wound healing.

In this study, group A underwent surgery with a mean operative time of 19.2 minutes, while group B had a mean operative time of 26.1 minutes, with a statistically significant difference between the groups. Pain severity was assessed using the visual analogue scale (VAS) after 24 hours, with mean values of 6.3 in group A and 6.6 in group B. After one week, the VAS findings were 3.3 in group A and 0.7 in group B, showing a highly significant difference in pain measurement between the groups. Complications did not differ significantly between the groups. The primary outcome, wound healing time, was significantly different between the groups, with group

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A healing in 48.3 days and group B in 39.1 days. No removal of marsupialisation stitches was required in either group. Bhat et al compared the relative efficacy of different surgical treatments for AF through a network meta-analysis.Systematic searches of MEDLINE, EMBASE and CENTRAL databases up to October 2022 identified randomised controlled trials (RCTs) comparing surgical treatments for anal fistulae. Fistulae were classified as simple (inter-sphincteric or low trans-sphincteric fistulae crossing less than 30% of the external anal sphincter (EAS)) and complex (high trans-sphincteric fistulae involving more than 30% of the EAS). Treatments evaluated in only one trial were excluded from the primary analyses to minimise bias. The primary outcomes were rates of success in achieving AF healing and bowel incontinence.Fifty-two RCTs were included. Of the 14 treatments considered, there were no significant differences regarding short-term (6 months or less postoperatively) and long-term (more than 6 months postoperatively) success rates between any of the treatments in patients with both simple and complex anal fistula. Ligation of the inter-sphincteric fistula tract (LIFT) ranked best for minimising bowel incontinence in simple (99.1% of comparisons; 3 trials, n = 70 patients) and complex anal fistula (86.2% of comparisons; 3 trials, n = 102 patients).There is insufficient evidence in existing RCTs to recommend one treatment over another regarding their short and long-term efficacy in successfully facilitating healing of both simple and complex anal fistulae.[13]

CONCLUSION

Marsupialization of the skin edges of anal fistulotomy wound, despite potentially increasing surgical duration, significantly improves wound healing and reduces long-term postoperative pain without elevating the risk of other complications.

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