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ORIGINAL ARTICLE

Efficiency of Closed Hemorrhoidectomy in the Treatment of Third-Degree Hemorrhoids

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ABSTRACT

One of the most common surgical condition is hemorrhoids and estimated that one-fourth of all adults are affected. Four-grade hemorrhoids are resistant to non-surgical treatment and typically needed surgical intervention.

Aim: The current study's goal was to evaluate the effectiveness of closed hemorrhoidectomy for the treatment of third-degree haemorrhoids.

Methods: Following approval from the hospital's ethical and research committee, this case series study was held in the surgical department of Lady Reading Hospital, Peshawar from July 2021 to July 2022. The study included 100 patients in total with third-degree haemorrhoids of both genders. Patients were subjected to a proctoscopic examination following a digital rectal examination for diagnosis and closed hemorrhoidectomy was performed in appropriate patients. To assess the effectiveness of the procedure, these patients were followed up with one week after surgery for post-operative pain. The 10-point Visual Analogue Score (VAS), with 0 exhibiting no pain and 10 the most intense agony, was used to measure post-operative pain. The gender, age and post-operative pain parameters were documented in a proforma. SPSS version 22.0 was used for data entry and analysis.

Results: The study included 100 individuals who underwent closed hemorrhoidectomy. The patients' ages ranged from 20 to 65 years, with 42.58 years of mean age and 12.18 of S.D. 82 patients (82%) done with successful closed hemorrhoidectomy and exhibit good outcome in terms of postoperative pain.

Conclusion: In patients with third-degree haemorrhoids, closed hemorrhoidectomy was helpful in terms of postoperative pain.

Keywords: Hemorrhoids, Hemorrhoidectomy, Efficacy

INTRODUCTION

In the absence of prior intervention, hemorrhoidal venous cushions are physically present and considered as normal anorectal structures[1-2]. Hemorrhoidal venous cushions mostly encountered anal pathology due to its extremely sensitive position, abundant vascular supply, and propensity to prolapse and engorge. The symptoms might be somewhat unpleasant, like itching, or extremely alarming, such rectal hemorrhage. For their management, there are numerous interventions available, varies from outpatient treatments, topical medicines and surgical interventions that aim to excise or repair[3-4].

The American Society of Colon and Rectal Surgeons (ASCRS) recommends for assessing haemorrhoids patients to determine which individuals need endoscopic assessment of the colon, as well as for treatment choices such dietary modification, surgical hemorrhoidectomy and OPD-based procedures. The best surgical procedure to treat haemorrhoids is still up for dispute, but none of the available surgical options are considered ideal that is efficient while being painless and safe[5-6]. In actuality, the likelihood of recurrence following surgery increases the if the patient experience pain during the procedure. High-grade symptomatic haemorrhoids, low-grade haemorrhoids that are resistant to non-surgical treatment, and haemorrhoids with complications like strangulation and thrombosis typically necessitate surgery[7]. If additional anorectal diseases are present that necessitate surgery in addition to the haemorrhoids, the patient may need surgery[8]. Dependent on whether the post-operative defects are left closed or open, hemorrhoidectomy can be either open or closed. 2.7% of 25 individuals in one study who underwent closed hemorrhoidectomy experienced recurrence after the procedure. Another study concluded that closed hemorrhoidectomy offers more benefits than open hemorrhoidectomy[9]. One week following surgery, solitary 3 (6.7%) patients who had closed hemorrhoidectomy suffered post-operative pain, in comparison to 5 (16.6%) patients who had open hemorrhoidectomy in ??? study. The current study's goal was to evaluate the effectiveness of closed hemorrhoidectomy for the treatment of third-degree haemorrhoids. The management of disease recurrence and post-procedural pain, which continue to be the most difficult issues in the haemorrhoids treatment will be further guided by this study.

MATERIAL AND METHODS

Following approval from the hospital's ethical and research council, this case series study was conducted in the General Surgery Department of Lady Reading Hospital, Peshawar from July 2021 to July 2022. Through the out-patient department, a total of 100 patients with third-degree haemorrhoids of both genders were included.

Inclusion criteria: 1.Patients of both genders. 2. Patients between the ages of 20 and 60. 3. On digital rectal examination and proctoscopy, patients were found to have Grade III haemorrhoids due to their signs and symptoms of bleeding, swelling and pain around the anus.

Exclusion Criteria: 1.Grade I, II, and IV haemorrhoids were omitted since we included grade III haemorrhoids. 2. Patients with additional complex lower GI issues, such as cancer or fistula in ano, which may be confounding factors for postoperative pain management. 3. Patients who were lost to follow-up were also not included in the analysis.

Patients who met the study's inclusion criteria were added to the study after receiving permission from the hospital's ethical and research council. All patients provided written informed consent, which was also collected. Patients underwent thorough examinations and history that covered the disease's symptoms. Patients were subjected to a proctoscopic examination following a digital rectal examination for diagnosis and exclude any other related disorders. Basic investigations and systemic analysis were also carried out. Finally, a closed hemorrhoidectomy was performed in appropriate patients. To assess the effectiveness of the procedure, these patients were followed up with one week after surgery for post-operative pain. The 10-point Visual Analogue Score (VAS), with 0 exhibiting no pain and 10 the most intense agony, was used to measure post-operative pain. The gender, age and post-operative pain parameters were documented in a proforma. SPSS version 22.0 was used for data entry and analysis. Age, the length of the surgery, and the post-op VAS Pain

Score are numerical variables for which mean and SD were determined. For efficacy determination; frequencies and percentages were calculated. Gender, surgery duration and post-operative pain were the effect modifiers in which efficacy was determined. A chi square test was used after stratification, with 0.05 of p value being considered significant.

RESULTS

A total of 100 patients with Grade III haemorrhoids participated in the study to determine the effectiveness of closed hemorrhoidectomy in reducing postoperative pain. The male to female ratio was 1.35:1. (Fig1).

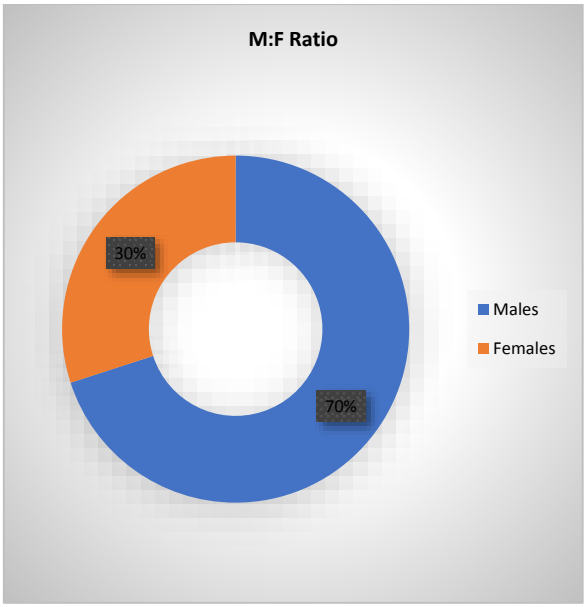

Figure 1:

The patients' ages ranged from 20 to 65 years, with 42.58 years of mean age and 12.18 of S.D. The patient's age was divided into four groups, with the age group from 31 to 45 years old having the highest prevalence of Grade III haemorrhoids and over 60 years old having the lowest prevalence (Table 1).

Table-1: shows the age-group distribution of patients

	Frequency	Percent	Mean+SD
≤30 years	30	30	42.58 ±12.18 S.D
31-45 years	34	34	
45 -60 years	22	22	
>60 years	14	14	
Total	100	100.0	

Table-2: shows the efficacy of Grade-III hemorrhoidectomy in various age-groups

Age in years		Efficacy		Total	p-value
		Yes	No		
	(≤30 years)	30(88.2%)	4(11.8%)	34(100.0%)	0.194
	31-45 years	26(78.8%)	7(21.2%)	33 (100.0%)	
	45 -60 years	14(73.7%)	5(26.3%)	19 (100.0%)	
	>60 years	10(71.4%)	4(28.6%)	14 (100.0%)	
Total		82(82%)	18(18%)	100(100.0%)	

In 82 (82%) patients, closed hemorrhoidectomy was effective in reducing postoperative pain, but in 18 (18%) patients, it was ineffective because they experienced pain that registered higher than 3 on a VAS. Age-specific patient distribution for closed hemorrhoidectomy reveals that efficiency in younger age groups was somewhat higher than in older age groups, although it was statistically insignificant with a p-value of 0.194. Patients ≤ 30 years old had an efficacy of 88.2 in comparison to the patients over 60 years old who had an efficacy of 71.4%. (Table 2).

Efficacy stratification over procedure length and gender exhibited insignificant role (Table 3).

Table-3: shows the Procedure duration and gender wise distribution of efficacy of Grade-III hemorrhoidectomy

Sex		Efficacy		p-value
		Yes	No	
	Male	50(80.6%)	12(19.4%)	0.212
	Female	31(81.6%)	7(18.4%)	
Duration of Procedure				
≤25 mints		45(69.2%)	20(30.8%)	0.751
>25 mints		20(57.1%)	15(42.9%)	

DISCUSSION

The most common surgical condition a surgeon deals with on a daily basis is haemorrhoids. Hemorrhoids do not pose a life-threatening hazard, but they still give the sufferer pain whenever he defecates. As a result, it merits thorough assessment and control. There has been numerous research that have examined the various methods of treating haemorrhoids, but no perfect method has ever been articulated for this condition[10-11]. In line with a study by Akindiose, we discovered that more patients in the age range of 30-45 years in our study had haemorrhoids[12]. Early presentation might be due to nutritional changes and sedentary lifestyle that cause persistent constipation and bowel difficulty. Males outnumbered females in our study, as was also the case in Akindiose, Emeka, and Picchio's respective studies[13-14]. The fact that men outnumber women in our study may be a result of the women's reluctance to visit for a checkup. Hemorrhoidal surgery often results in pain. Several surgical procedures, such as open and closed hemorrhoidectomy, bipolar scissor hemorrhoidectomy, harmonic scalpel hemorrhoidectomy etc., have been suggested to minimize the postoperative pain[15]. An open hemorrhoidectomy had much less postoperative pain than a closed hemorrhoidectomy, according to a recent study. After hemorrhoidectomy, the wounds are stitched with an absorbable suture in the closed hemorrhoidectomy procedure. After a close hemorrhoidectomy, the healing process is quicker and less painful[16-17]. 110 subjects were randomly assigned to either closed or open treatments in a recent study. Even though the results were consistent after a year, our investigation also revealed that the closed group's healing and pain scores had improved[18-19]. A Sundeep study found that pain postoperatively was less in closed hemorrhoidectomy than in open hemorrhoidectomy, and the efficacy of pain postoperatively after closed hemorrhoidectomy in the current study was 82 percent, which is equivalent to Sundeep study[20]. The primary wound closure following hemorrhoidectomy without leaving any raw areas, as in open hemorrhoidectomy, results in decreased postoperative pain in our study[21]. Khalid's research, in contrast, found no distinction between open and closed hemorrhoidectomy groups in terms of postoperative pain[22].

CONCLUSION

In summary, a closed hemorrhoidectomy causes reduced postoperative pain. As a result, it is a reliable and safe method. The preferred treatment for third- and fourth-degree haemorrhoids is closed hemorrhoidectomy. However, further randomized studies should be conducted before any future recommendations for such patients are made.

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