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Original Research Paper

Surgery

OPEN VERSUS CLOSED HEMORRHOIDECTOMY – A COMPARATIVE STUDY

Dr. Sujeet Kumar Bharti Senior resident (Gastrosurgery Department) IGIMS, Patna

Dr. Kirti Priya* Senior Resident (Pathology Department) IGIMS, Patna *Corresponding Author

ABSTRACT

Background and Objectives: - Hemorrhoids are specialized, highly vascularized cushions within the normal anal canal. Hemorrhoidectomy is considered as an effective treatment for III degree and IV degree hemorrhoids. The conventional Milligan-Morgan open hemorrhoidectomy remains the more commonly performed operation. Ferguson's closed hemorrhoidectomy has gained considerable attention because of the less pain, faster wound healing and better patient compliance. Nonetheless, randomized controlled trials have reported conflicting results regarding post-operative outcomes between two methods.

Methods: - 60 patients were included in this study, who underwent hemorrhoidectomy, by split them into two equal groups. Group A underwent open hemorrhoidectomy and group B underwent closed hemorrhoidectomy. Patient in each group were studied in terms of post-operative pain, wound healing, bleeding, length of hospital stays and the results were analysed and tested with statistical methods.

Results: - In study of 60 cases, peak incidence was found at 46 years of age and more common in males (5.67:1). Difference in pain between the 2 groups was found statistically significant (P value <0.05). 29 (96/67%) patients had completely healed wound from group B (closed) at 3rd week compared to 5 (16.67%) from group B. 7 (23.3%) patients in closed group had complications, in contrast to 25 (83.3%) in open group.

Conclusion: - We got in this study that patients who underwent Ferguson's closed hemorrhoidectomy had less post-operative pain, bleeding, complications, early healing of wound and early back to routine work compared to Milligan-Morgan's open hemorrhoidectomy group.

KEYWORDS : Milligan-Morgan Hemorrhoidectomy, Ferguson Hemorrhoidectomy, Bleeding per-rectum, Wound Healing.

INTRODUCTION:

Hemorrhoids are the most ordinary chronic Anorectal disease known. It is the most misunderstood disease. Patients ascribe hemorrhoids for any bleeding manifestations perianally[1]. The term hemorrhoids is derived from Greek, haima-meaning blood and rhoosmeaning flow. The incidence of hemorrhoids many from place to place and usually seen in elderly, although with the change in the life style and food habits, the bowel habits being affected, the prevalence has been increasing in the population and seen at a younger age[2].

Hemorrhoids are classified as I to IV degree based on the clinical findings and severity. Hemorrhoidectomy is considered as an effective treatment for III degree and IV degree hemorrhoids[3]. Among them the most commonly done procedures are, conventional open technique,described by Milligan and Morgan in 1937, and the closed technique was described byFerguson in 1959[4]. However, the Milligan-Morgan open excision hemorrhoidectomyremains the more commonly performed operation. The low expense and ease of techniquemakes it the procedure of choice, even though many newer procedures have subsequentlybeen proposed. Ferguson's closed hemorrhoidectomy has gained considerable attentionbecause of the less pain, faster wound healing and better patient compliance, and is now theprocedure of choice in many countries. We are conducting this study to compare the outcomes following hemorrhoidectomy by the open and closed techniques.

AIM AND OBJECTIVES: -

To compare the outcomes following hemorrhoidectomy by the Milligan-Morgan's open and Ferguson's closed technique. The variables that are being compared are Post-operative pain, Complications, Length of hospital stay,and Wound healing.

RESULTS: -

In the duration of study from 2016 to 2018, hemorrhoidectomy was done in 68 cases, among them 5 patients had co-morbidities like diabetes or hypertension and was not considered for the study. Among the rest 3 patients had associated conditions as fistula in ano, so were excluded from the study. 4 patients among the 8 excluded were operated for symptomatic grade II hemorrhoids, so were not included in the study.

Among the 60 selected patients, on comparing the age distribution, we found mean age was 45.88 with a standard deviation of 13.973. Minimum age was 20years and maximum was 80years. There was no significant difference in the age distribution among the 2 groups.

We considered only grade III and grade IV hemorrhoids in this study who underwent hemorrhoidectomy. In the 60 patients, 44(73.3%) patients had grade III hemorrhoids, 16(26.7%) patients had grade IV hemorrhoids. Group-wise distribution is as shown in (table-1).

Table 1: Distribution of Grades of Hemorrhoids

Group	Grade of hemorrhoid	
	Grade III	Grade IV
Group A (n=30)	23	7
Group B (n=30)	21	9

For comparison sake the mean was calculated for pain on the days of assessment for each group. On statistical analysis for significance using student 't' test, it was found pain was more severe in group A i.e. patients in whom open hemorrhoidectomy was done on comparing with group B patients who underwent closed hemorrhoidectomy, with 'p' value <0.05. It was found that, there was a significant difference in pain severity between the 2 groups of patients in first 3weeks, with 'p' values <0.05. But the difference seen after 3weeks was not statistically significant. Among the 60 patients, 34 patients had completely healed surgical wound at the end of 3rd post-operative week and remaining 26 patients had completely

healed wounds at varying intervals after 3rd week. Out of 34, 29 were from group B, i.e. operated by Ferguson's closed method and 5 were operated by Milligan-Morgan's open method.

DISCUSSION: -

The main aim of any treatment of a disease is to relieve the pain, and minimize the suffering. Hemorrhoids as such have pain only if it is thrombosed or if the hemorrhoids are strangulated. Nonetheless hemorrhoids are associated with significant discomfort in terms of bleeding, peri-anal itching. Hemorrhoidectomy is considered the standard of treatment for symptomatic grade III and grade IV hemorrhoids. Many surgical procedures are described, with varying merits and demerits.Among them most commonly done procedures are the conventional open technique described by Milligan and Morgan in 1937, and the closed technique described by Ferguson in 1959. The low expense and ease of technique makes it the procedure of choice, even though many newer procedures have subsequently been proposed. Ferguson's closed hemorrhoidectomy has gained considerable attention because of the less pain, faster wound healing and better patient compliance, and is now the procedure of choice in many countries. Nonetheless, randomized controlled trials have reported conflicting results as to whether closed hemorrhoidectomy provides less pain and more rapid wound healing compared to the open technique.The results from our study shows wound healing was faster in the closed group whencompared with open group. Patients who underwent open hemorrhoidectomy having 16.67%complete epithelization rate at 3 weeks and complete epithelization rate was 96.67% at 3 weeks with closed method, which is extremelyencouraging. There was complete healing in 40% of the patients with Openhemorrhoidectomy and 90% of those with closed hemorrhoidectomy after 1month in the study by Arroya[5]which gives validation to outcomes of the presented study.Arbmanin 2000 from his study of a total of 77 patients showed that at follow-up after three weeks 86% of the Ferguson's hemorrhoidectomy patients had completely healed wounds, of theMilligan-Morgan patients; only 18% had completely healed wounds. From a study published Lahore by Rafiqit was seen that after 3 weeks, 70% after closedhemorrhoidectomy hadcompletely healed wounds whereas 15% with open hemorrhoidectomy had completely healedwounds. Frequency of prolonged serous discharge was more in unhealed closed wounds whereaspruritus and granuloma were high in open wounds.Wound infection was observed in 4(13.3%) of cases in the Open Group compared to (3.3%) of cases in the Closed group. In a study from Niger [6]slightly different results regarding wound infection was seen; two cases of wound infection all in the patients undergoing Ferguson hemorrhoidectomy was seen.

CONCLUSION: -

In our study comparing the post-operative outcomes of the 2 methods, Milligan-Morgan's open hemorrhoidectomy and Ferguson's closed hemorrhoidectomy in 60 patients, we found that patients who underwent Ferguson's closed hemorrhoidectomy had less pain in the early postoperative period compared to Milligan-Morgan's open hemorrhoidectomy, but after 3weeks the pain was similar in both the groups. Closed group had less bleeding, complications, early healing of wound and early back to routine work compared to open group, which makes Ferguson closed hemorrhoidectomy superior to Milligan-Morgan open hemorrhoidectomy.

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