ORIGINAL RESEARCH PAPER

General Surgery

A COMPARATIVE STUDY OF OPEN (MILLIGAN – MORGAN) VERSUS CLOSED (FERGUSON) HEMORRHOIDECTOMY: A TERTIARY CARE CENTRE EXPERIENCE OF AMRAVATI, MAHARASHTRA.

KEY WORDS: Closed hemorrhoidectomy, Haemorrhoids, Open hemorrhoidectomy.

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ABSTRACT

Background: Hemorrhoidectomy is the treatment of choice for patients with third-degree or fourth-degree haemorrhoids. This prospective randomized clinical study compared the outcome of surgical haemorrhoidectomy by open and closed techniques in terms of postoperative pain, wound healing, and morbidity.

Methods: This prospective randomized clinical study was conducted during the period January 2018 to June 2019 in Dr. Panjabrao Deshmukh memorial medical college. All consecutive patients with Grade III internal haemorrhoids or Grade IV haemorrhoids were randomly allocated to one of two groups.

Results: There were 50 patients in each group. No statistically significant differences were found between the two methods regarding complications, pain, or postoperative stay. There were 3 reoperations for bleeding, all after Milligan-Morgan operations. At follow-up after three weeks 76 percent of the Ferguson patients had completely healed wounds, and none had signs of infection. Of the Milligan-Morgan patients, only 24 percent had completely healed wounds, and symptoms of delayed wound healing were significantly more frequent..

Conclusion: Both methods are fairly efficient treatment for third and fourth degree hemorrhoids, without serious drawbacks. The closed method has no advantage in postoperative pain reduction but is more advantageous with respect to faster wound healing

INTRODUCTION

Hemorrhoids is common disease. But there are many misconceptions regarding this disesae. Hemorrhoids are defined differently over the period of years from simple varicosities of hemorrhoidal plexus to specialized highly vascular "cushions" of discrete masses of thick submucosa, containing blood vessels, smooth muscles, elastic and connective tissue [1].

The term "Hemorrhoid" is derived from Greek adjective meaning bleeding (Haema-Blood, Rhoos-Flowing). The term "Pile" is derived from the Latin word "Pi la", a pill or ball3. When the patient complains of a swelling the disease is called as piles and when the patient complaints of bleeding per rectum the disease is called as hemorrhoids [2].

Hemorrhoids are common disease affecting people of all ages and both sexes [3]. It is said that 40 percent of the population have symptoms due to hemorrhoids at some time of their lives, a price possibly man has had to pay following the evolution of his erect posture. It has been estimated that 50% of the population has hemorrhoids by the age of 50 years and these are supposed to be the commonest cause of rectal bleeding [4,5]. Historically, the most practiced surgical procedures for hemorrhoids were hemorrhoidectomies according to Milligan Morgan and Fergusson techniques [6,7]. The purpose of this study was to compare the postoperative pain, wound healing and morbidity in correlation of two techniques.

MATERIALS AND METHODS

This prospective randomized clinical study was conducted during the period January 2018 to June 2019 in Dr. Panjabrao Deshmukh memorial medical college. All consecutive patients with Grade III internal haemorrhoids or Grade IV haemorrhoids were randomly allocated to one of two groups.

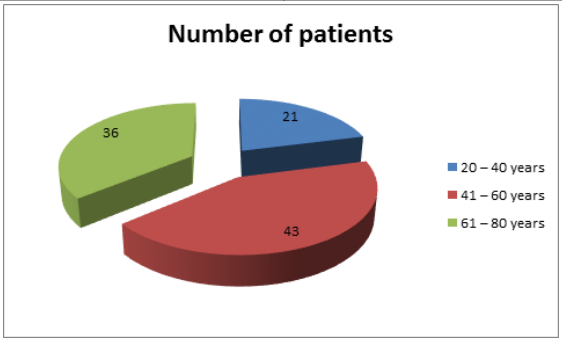
A detailed informed consent was taken from all the patients. A routine soap water enema was administered at the night before operation and single dose prophylactic injections of third generation cephalosporin 1gm intravenously and metronidazole 500 mg intravenously was administered at the time of induction. The entire wound was left open in the open group and completely closed using 2-0 chromic sutures in the closed group. All the operations were performed by two senior consultant surgeons and the follow-up was also conducted by the same team. Postoperative pain was assessed by a linear analog scale. Additional consumption of analgesics on the day of surgery and at defecation during the first week was recorded. Patients were followed up 1, 2, and 3 weeks after the procedure.

RESULTS

100 patients were selected and randomly allocated to the procedure, 50 in each group. The age ranged from 20 years to 80 years, most common age group of patient was 41 – 60 years.

Table 1: Distribution of patients according to age group

Age group	Number of patients
20 – 40 years	21
41 – 60 years	43
61 – 80 years	36

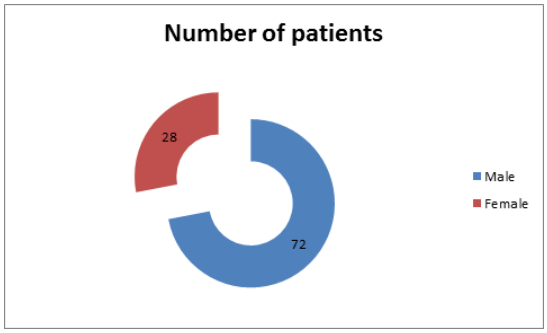


Graph 1: Distribution of patients according to age group

Among the total number of patients 72 were male and 28 were female.

Table 2: Distribution of patients according to gender

Gender	Number of patients
Male	72
Female	28

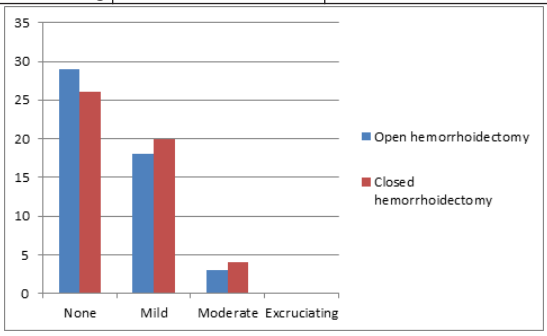


Graph 2: Distribution of patients according to gender

The pain perception 12 hours after surgery indicated not much difference between open and closed hemorr hoidectomy group.

Table 3: Pain perception 12 hours after surgery.

Pain	Open hemorrhoidectomy (n-50)	Closed hemorrhoidectomy (n-50)
None	29	26
Mild	18	20
Moderate	3	4
Excruciating	0	0

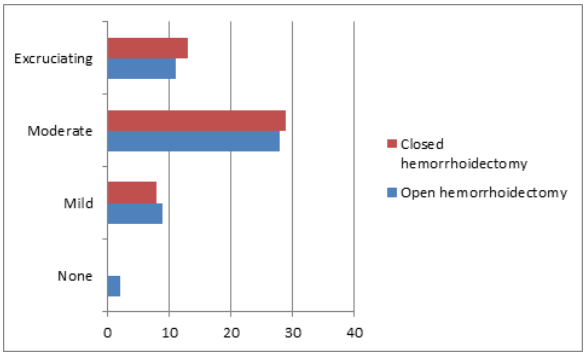


Graph 3: Pain perception 12 hours after surgery.

One week after surgery all patients experienced mild to moderate pain in closed group, whereas in the open group 2 patient did not experience any pain. There was no much difference that patient experienced excruciating pain in open group than in the closed group.

Table 4: Pain one week after surgery.

Pain	Open hemorrhoidectomy (n-50)	Closed hemorrhoidectomy (n-50)
None	2	0
Mild	9	8
Moderate	28	29
Excruciating	11	13



Graph 4: Pain one week after surgery.

The mean time until the patients were pain free after surgery was 20 days in the open group and 22 days in closed group, signifies not much difference. No patient suffered excessive postoperative bleeding. There were 3 reoperations for bleeding, all after Milligan-Morgan operations.

A small proportion of patients required catheterization and there was no significant difference incontinence between the two groups. At follow-up after three weeks 76 percent of the Ferguson patients had completely healed wounds, and none had signs of infection. Of the Milligan-Morgan patients, only 24 percent had completely healed wounds, and symptoms of delayed wound healing were significantly more frequent.

DISCUSSION

Hemorrhoids is a common disease and common in female, but the male:female ratio in our study was found to be higher than in study by Arbman G et al [8]. In the present study, we found that more number of patients presented with hemorrhoids in the age group of 41 to 60 years. Hemorrhodectomy was done by two methods open (Milligan-Morgan) and closed (Ferguson) hemorrhoidectomy. Most of the patients experienced pain following hemorrhoidectomy but it was more in closed group than those who underwent open hemorrhoidectomy. More emphasis has been applied to the management of pain after haemorrhoidectomy, not only because of the pain but also because of its role in urinary symptom [9]. The cases of urinary retention observed in our study (8%) are less than those indicated by Toyonaga et al, Pescatori (21.9%), and they are near the data provided by Chik et al, (7.77%) in a study on stapled hemorrhoidopexy [10,11,12].

The Ferguson closed haemorrhoidectomy has reportedly been associated with less post-operative discomfort, faster healing, intact postoperative continence, and no need for subsequent anal dilation. Similarly, McConnell and Khubchandani reported a small incidence of postoperative pain, infection, and faster healing [13]. In another randomized trial, Carapeti showed that there was no significant difference in the mean pain scores between the open and closed haemorrhoidectomy techniques [14]. No patient suffered excessive postoperative bleeding, postoperative bleeding is a particularly important complication in treating haemorroids.

Wound healing was considerably faster in patients operated on by the Ferguson technique. In the present study more patients (76%) had completely healed wounds following closed hemorrhoidectomy as compared to (24%) open group after three weeks. In study conducted by Arbman G et al, You SY et al, wound healing following closed hemorrhoidectomy was 75% and 86% respectively and healing rates following open hemorrhoidectomy were 18% in both studies [8,15]. In yet another prospective, randomized trial, Gencosmanoglu et al reported that the open technique is more advantageous, in that patients experience less discomfort during the early post-operative period, although the healing time was shorter with the closed technique [16]. A higher rate of wound healing was noted following closed hemorrhoidectomy as compared to open in all the studies.

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