



Research Article

“COMPARATIVE STUDY IN THE MANAGEMENT OF HAEMORRHOIDS BY MINIMAL INVASIVE PROCEDURE FOR HAEMORRHOID (MIPH), BARRON’S BANDING WITH SURGICAL EXCISION”

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ABSTRACT

Background: Haemorrhoids are one of the commonest conditions encountered in our surgical OPD. To treat this condition we have a wide range of treatment modalities. Our study intends to know the various modes of presentation in our practice namely MIPH, Barron’s banding and surgical excision and also compare the efficacy of these procedures, and study the common post operative complications.

Methods: Patients provisionally diagnosed to have haemorrhoids by clinical evaluation were selected for the study. A total number of 30 patients were studied in each group for this randomized study. Patients were selected consecutively during study period as and when they were presented with following inclusion and exclusion criteria.

Results: In our present study, 76% were male patients. The mean age of presentation was 39.4 years, bleeding was the commonest symptom which was seen in 73.3%. Straining was seen in 51.1%, pain as a presenting complaint is seen in 43.3% Post operative evaluation revealed pain to be the important factor in 90% of open haemorrhoidectomy group and only 6.7% in banding group. Bleeding occurred in 36.7% of the patients in haemorrhoidectomy group, while it occurred in 16.7% of banding group and 10% of MIPH group. Retention of urine was seen in 13.3% of patients in haemorrhoidectomy group. Hospital stay was more in haemorrhoidectomy group which was 3.8 days, and 1.1 days in MIPH group. Recurrence was comparable among all the three groups with banding showing 10 %, MIPH 10%, and haemorrhoidectomy 3.3%.

Interpretation and conclusion: In conclusion haemorrhoids have a male preponderance. It usually occurs mostly in the mid 40’s. Bleeding is one of the commonest modes of presentation, with straining, hard stools and pain being others. MIPH has least postoperative complication like bleeding and less hospital stays, and least recurrence. Haemorrhoidectomy has more postoperative complication like pain, bleeding and more hospital stay. Banding has less postoperative complications, but should be done in appropriately selected cases. The recurrence rate was slightly more in banding.

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INTRODUCTION

Haemorrhoids are dilated veins occurring in relation to the anus. Haemorrhoids are one of the commonest problems encountered in our surgical practice. To treat this condition we have a wide range of modalities like haemorrhoidectomy, banding, sclerotherapy and stapling haemorrhoidectomy .these ranges of treatment modalities are limited to few of the available procedure in our setup. Milligan Morgan haemorrhoidectomy is the most widely used procedure in the surgical management of haemorrhoids. Barron’s banding is one of the time-tested minimally invasive therapy .it is a safe and effective therapy for the internal haemorrhoids. It can be used to treat all degrees of internal haemorrhoids.

Minimal invasive procedure for haemorrhoids (MIPH) is relatively newer technique. Our study intends to know the various modes of presentation in our practice .also compare the efficacy of these three procedures, and study the common post operative complications.

AIM AND OBJECTIVES

Aim

To do a comparative study of haemorrhoid management by Barron’s banding, MIPH and surgical excision.

Objectives

- ✓ To study the age and sex distribution
- ✓ To study the various modes of clinical presentation
- ✓ To compare post operative outcomes like pain, bleeding, retention of urine, hospital stay, recurrence, between the three intended procedures.

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METHODS AND MATERIALS

The present study included a total of 90 patients visiting general surgery department of Krishna hospital and medical research centre, Karad from June 2017 to May 2018. Patients provisionally diagnosed to have haemorrhoids by clinical evaluation were selected for the study. A total number of 30 patients were studied in each group for this randomized study. Patients were selected consecutively during study period as and when they are presented with following inclusion and exclusion criteria. Patients were randomly allocated to each of the three groups.

Inclusion Criteria: The study includes all patients presenting with

1. Complain of haemorrhoids
2. Clinical examination
3. 2nd or 3rd degree haemorrhoids
4. Rectal examination and proctoscopy and
5. Patient willing to undergoing definite therapy for the same

Exclusion Criteria: Patients with associated co morbid conditions like

1. Rectal carcinoma
2. Fissure
3. Portal hypertensions
4. Dermatological lesions and
5. Inflammatory bowel disease
6. Patients who do not undergo surgical treatment or refused treatment are excluded from study.

METHODOLOGY

Patients who have been screened with above inclusion and exclusion criteria were selected for the study. These patients were subjected to analysis by a detail structural pro forma which included age and sex distribution modes of clinical presentation, data of various laboratory investigations were collected and they were allocated randomly into 3 groups .following the procedures post operative outcomes like pain, bleeding, retention of urine, hospital stay, recurrence, between the three intended procedures were recorded in the pro forma.

1. Barron’s banding group
2. Surgical excision group
3. MIPH group

Barron’s Banding Group

Rubber band ligation was essentially done as an out- patient procedure. After the patient fulfils all the inclusion criteria a detailed examination was done and banding proceeded with no premedication .No anaesthesia or sedation was used. The patient was prescribed stool softener, analgesic and antibiotic. The patient was observed in the OPD for any pain or bleeding and sent home in the evening. The patient was followed up as per the standard protocol. Pre-operative work-up for surgical excision group and MIPH group done.

Pre operative routine investigations were done with pre anaesthetic check-up. A neo-tonic enema was administered over night and the morning on the day of surgery.

Surgical Excision Group

Standard procedure of Milligan Morgan’s haemorrhoidectomy performed.

MIPH group

Standard procedure of MIPH was performed.

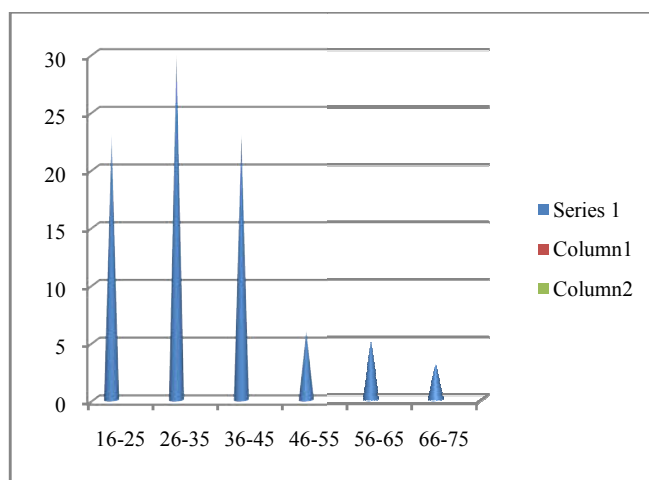
Post operative care

The patients were administered standard dose of antibiotic and analgesic. Pain was recorded through the stay by using visual analogue scale.

Various parameters of post operative complications for the study like pain, bleeding, retention of urine, discharge, days of hospital stay and recurrence was recorded using a standard pro forma for all the patients.

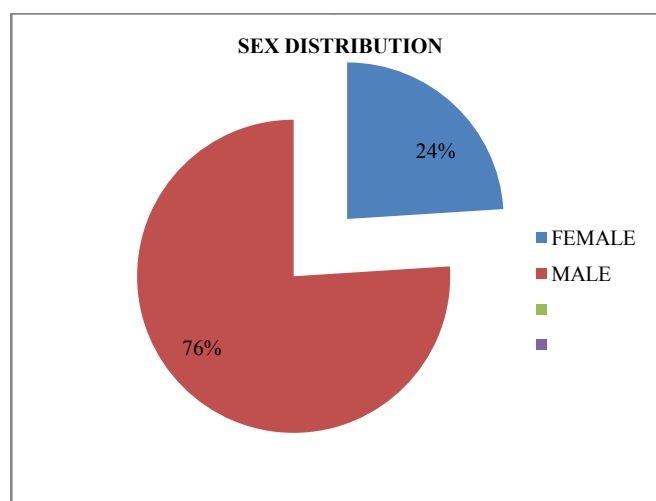
Follow up: All patients will be followed post operatively up to discharge and then for a month in the outpatient department.

RESULTS



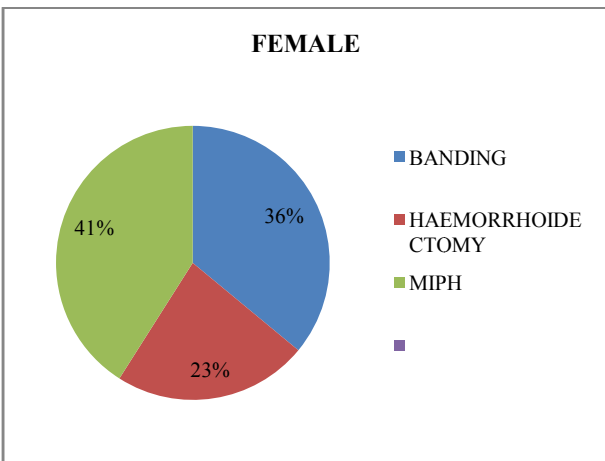
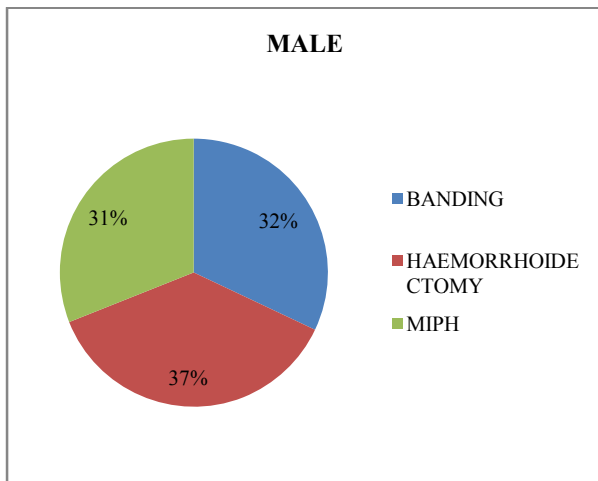
Graph I Graph Showing Age-Wise Distribution

In the present study the analysis of age wise distribution the range was from 16 years to 75 years. The mean age of presentation was 37.2+-15.6 years



Graph II Sex Distribution

In our study which included 90 patients the male patients were 68 in number (76%) and females were 22 in number (24%).

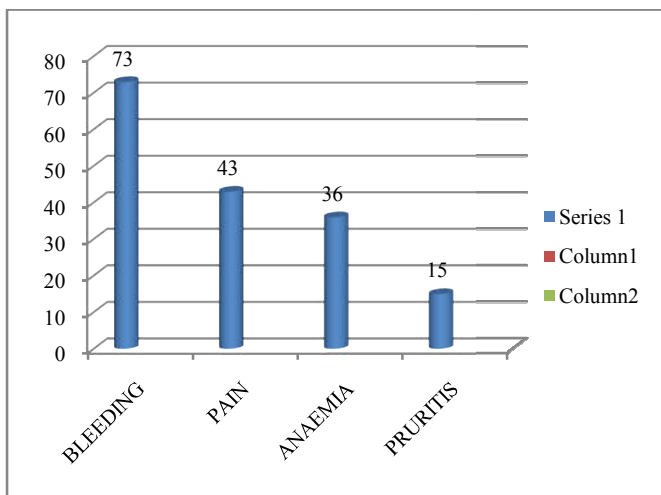


Graph III Graph Showing Sex Distribution Between The Three Procedures

Graph showing sex distribution between the three procedures.

The present graph shows that male and female patients were distributed equally among all the three groups. Males –banding (32%), haemorrhoidectomy (37%) and MIPH (31%).females – banding (36%) haemorrhoidectomy (23%) and MIPH (41%).

Pre-operative assessment of bleeding, pain, anaemia and pruritis in the study group was done. In the present study 66 patients presented with complaints of bleeding (73%). Pain was seen in 39 patients (43.3%) and pruritis was seen in 34 patients (37.8%). Anaemia was seen in 34 patients (36%).



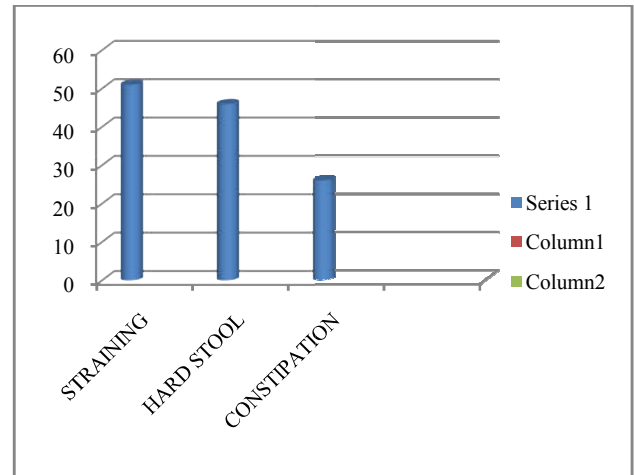
Graph IV Graph Showing Preoperative Assessment of Bleeding, Pain, Anaemia And Pruritis In The Study Group

Preoperative Assessment of Straining, Hard Stool And Constipation in the Study Group

In our study group straining was found to be one of major presenting symptoms with incidence of 51.1% (n=46) and hard stools was found to be 45.6% (n=41).these were the two important factors. Constipation was found in 23 patients (25.6%)

Table II Table Showing Preoperative Assessment Of Straining, Hard Stool And Constipation In The Study Group

	Percentage	Number
Straining	51	46
Hard stool	46	41
Constipation	26	23



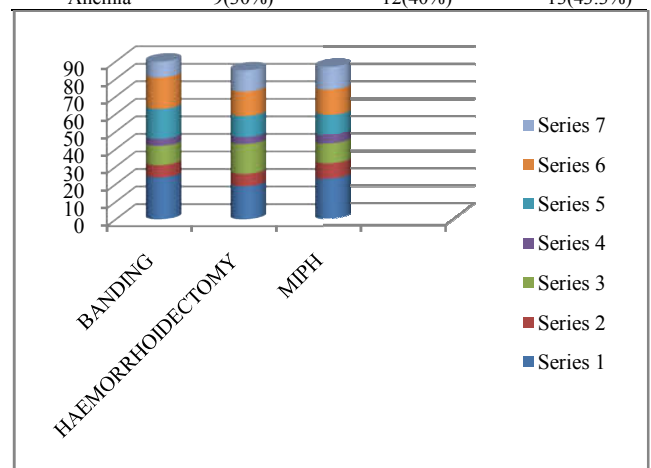
Graph V Graph Showing Preoperative Assessment Of Straining, Hard Stool And Constipation In The Study Group

Clinical Presentation between the Three Groups

The selected subjects were having identical clinical presentation. This shows that bias was minimized by proper selection.

Table III Table Showing the Various Modes of Clinical Presentation between the Three Groups

	Banding	Haemorrhoidectomy	Miph
Bleeding	24(80%)	19(66.3%)	23(76.7%)
Pain	11(36.7)	17(56.7%)	11(36.7%)
Pruritis	4(13.3%)	4(13.3%)	5(16.7%)
Constipation	7(23.3%)	7(23.3%)	9(30%)
Hard stools	17(56.7%)	12(40%)	12(40%)
Straining	18(60%)	14(46.7%)	14(46.7%)
Anemia	9(30%)	12(40%)	13(43.3%)



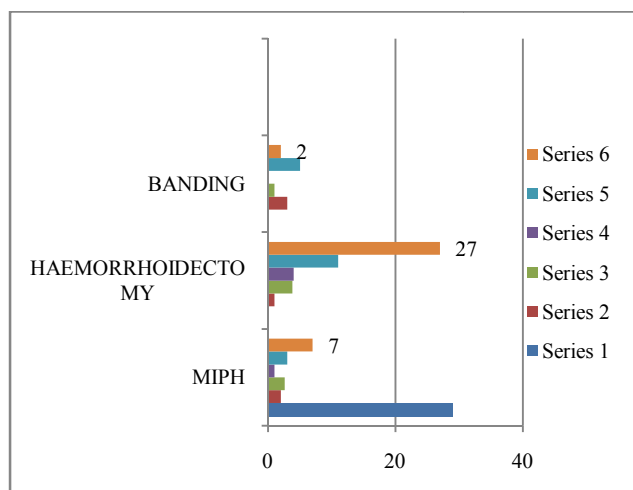
Graph VI Graph Showing the Various Modes of Clinical Presentation between the Three Groups

The Various Postoperative Complications between the Three Groups

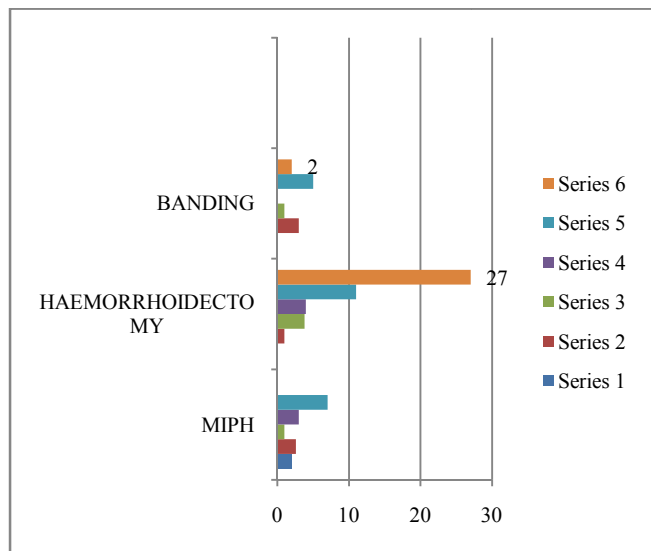
This shows that pain (90%), bleeding (36.7%) and duration of hospital stay (3.8 days) are significant in the haemorrhoidectomy group, whereas banding group had less complication, recurrence (10%) was found to be more. In MIPH group shows pain in (23.3%), bleeding (10%), and duration of stay (1.1 days).

Table IV Table Comparing the Various Postoperative Complications between the Three Groups

	Miph	Haemorrhoidectomy	Banding
Pain	7(23.3%)	27(90%)	2(6.7%)
Bleeding	3(10%)	11(36.7)	5(16.7%)
Retention	1(3.3%)	4(13.3%)	0(0%)
Hospital stay	1.1DAYS	3.8DAYS	1DAYS
Recurrence	2(6.7%)	1(3.3%)	3(10%)



Graph VII Graph Comparing the Various Postoperative Complications between the Three Groups

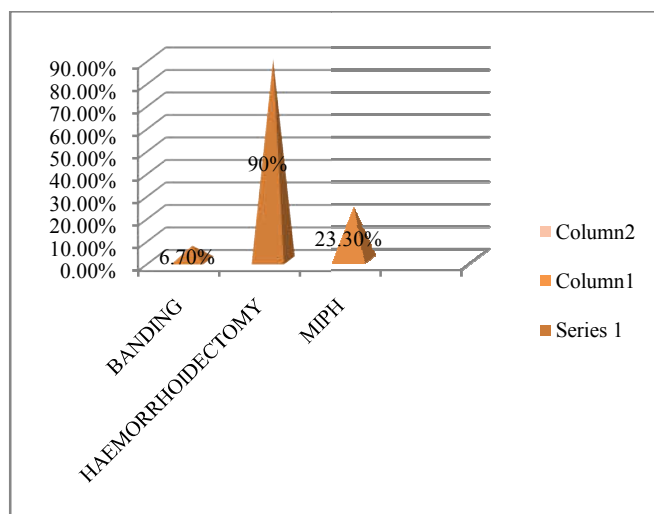


Postoperative Complications of Pain between the Three Procedures

In the present study haemorrhoidectomy group shows pain in 27 patients (90%).banding showed pain in only 2 patients (6.7%) and MIPH group showed pain in 7 patients (23.3%).the p value is 0.001 which is less than 0.05.that shows that pain is statistically significant.

Table –V and graph –VIII Table and graph comparing postoperative complications of pain between the three procedures

	Banding	Haemorrhoidectomy	Miph
PAIN	2(6.7%)	27(90%)	7(23.3%)

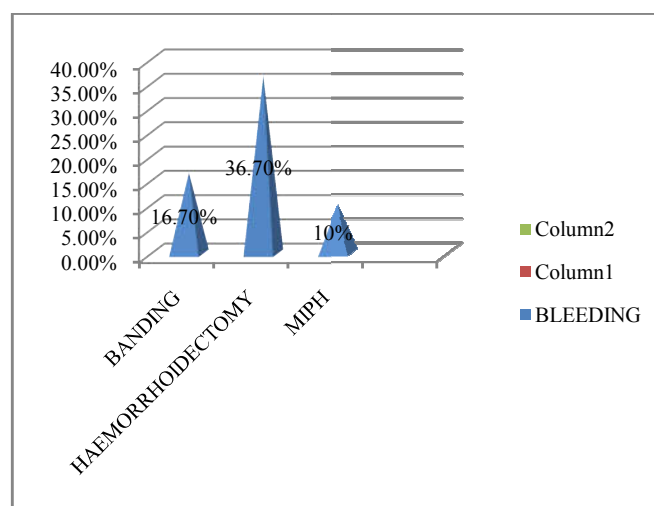


Comparing Postoperative Complications of Bleeding Between the Three Procedures

In our study bleeding was found maximal in haemorrhoidectomy group with 11 patients (36.7%) presenting with bleeding. banding showed only 5 patients (16.7%) to have bleeding. The least was observed in MIPH with only 3 patients (10%) showing post operative bleeding. The p value is 0.03 which is <0.05 and hence it is statistically significant

Table –VI and Graph –IX Table and Graph Comparing Postoperative Bleeding Between the Three Procedures

	Banding	Haemorrhoidectomy	Miph
Bleeding	5(16.7%)	11(36.7%)	3(10%)



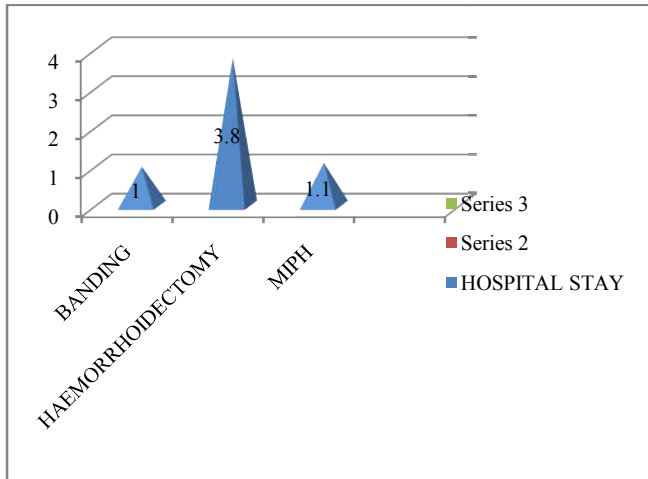
Comparing Days of Hospital Stay Between the Three Procedures

In our study haemorrhoidectomy group showed average hospital stay of 3.8days+ 0.9 days ,the range being 3-6 days .the MIPH group had the second least hospital stay with average being 1.1+0.35days.the least was banding which was done as an procedure and stay was one day. The p value is

0.001 which is <0.05, which shows that hospital stay in haemorrhoidectomy and MIPH group is statically significant.

Table –VIII and Graph –XI Table and Graph Comparing Days of Hospital Stay Between the Three Procedures

	Banding	Haemorrhoidectomy	Miph
Hospital Stay	1DAY	3.8 DAYS	1.1DAYS

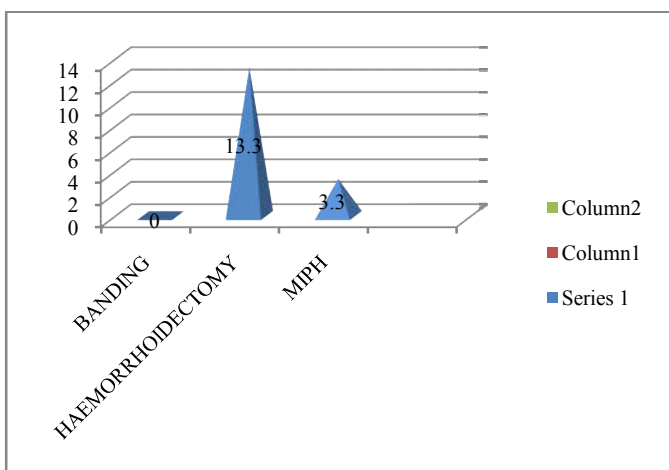


Comparing Days of Retention of Urine between Yhe Three Procedures

In the present study retention of urine was found highest in haemorrhoidectomy group with 4 patients having retention of urine (13.3%).in MIPH only one patient had retention of urine (3.3%).no such complication was found in banding. The p value is 0.06 which is more than 0.05 hence this postoperative complication is not statically significant.

Table-IX and Graph-XII Table and Graph Comparing Postoperative Retention of Urine Following the Three

	Banding	Haemorrhoidectomy	Miph
Retention of Urine	0	4(13.3%)	1(3.3)

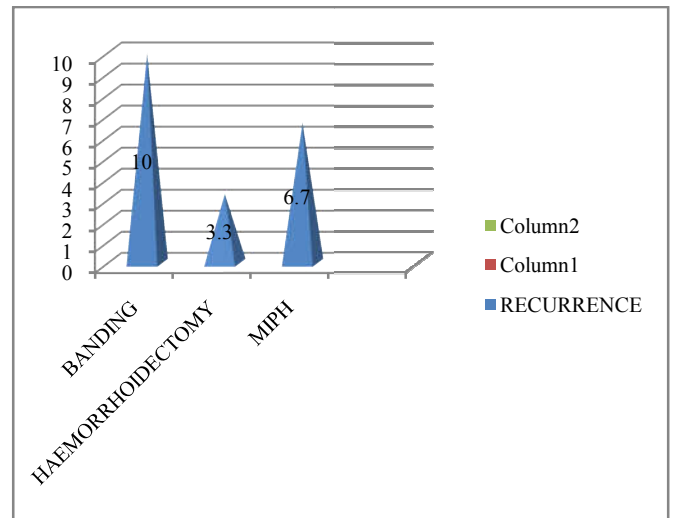


Compative Postoperative Recurrence Following the Three Procedures

In our study banding showed maximum recurrence in 3 patients (10%).MIPH had recurrence in 2 patients (6.7%),the least was observed in haemorrhoidectomy group with recurrence in 1 patient(3.3%),the p value is 0.59 which is >0.05 and hence it is statically not significant.

Table –X and Graph-XIII Graph Comparing Postoperative Recurrence between the Three Procedures

	banding	haemorrhoidectomy	miph
Recurrence	3(10%)	1(3.3%)	2(6.7%)



DISCUSSION

Age

Age wise distribution among the study group is – the range being from 16 years to 75 years. The mean age of presentation is 39.4 years 15.6 years. K.-H .Ng *et al* others⁵¹ have reported in his study that the median age of presentation is 50 years (range 18-88) years. This is comparable with the present study which is roughly 40 years.

Sex

In our study has 76% male and 24% female. Thomson JPS *et al* reported men more than women suffer from haemorrhoids.

Bleeding, Pain and Anaemia

In our study 73% patients presented with bleeding. K. –H. Ng *et al* others have reported bleeding in 80.7% of their subjects. Pain was seen in 43.3% patients. James desmod⁷ *et al* reported pain in 56% of his subjects. Anaemia was seen in 36% patients.

DISCUSSION AND ANALYSIS OF POST OPERATIVE OUTCOME BETWEEN THE THREE GROUPS

Bleeding

In our study bleeding was found maximal in haemorrhoidectomy group with 36.7% patients with bleeding. Banding showed only 16.7% patients have bleeding. The least was observed in MIPH with only 10% showing post-operative bleeding. The study done by Cheung showed bleeding in 7%.

Pain

In the present study haemorrhoidectomy group showed pain in 90%. MIPH showed pain in 23.3% and banding in 6.7% only. Cheung and Jai Bikachandni showed that post op pain to be present in 100% of the patients.

Retention of Urine

In the present study retention of urine was found to be highest in haemorrhoidectomy group with 13.3% patients. In MIPH only one patient had retention of urine. No such complication

was found in banding. Jai Bickchandni observed retention in 16.7% patients in haemorrhoidectomy patients.

Recurrence

In our study banding showed maximum recurrence in 10% patients. In MIPH in 6.7% patients has recurrence. The least was observed in haemorrhoidectomy group with 3.3%. Cheung had observed 3.3% recurrence in banding.

Summary

The present study included 90 patients. They were divided by simple random sampling into 30 patients in banding group, 30 patients in haemorrhoidectomy, and 30 patients in MIPH group. Among the 90 patients 68(76%) were male patients, 22 (24%) female patients. The mean age of presentation was 39.4+ 15.6 years, with age ranging from 16 years to 75 years. Of all the modes of presentation bleeding was the commonest symptom which was seen in 66 patients (73.3%). Straining was seen in 46 patients (51.1%), hard stools seen in 41 patients (45.6%). Pain as a presenting complaint is seen in 39 patients (43.3%). The postoperative analysis of results showed Pain to be the important factor in haemorrhoidectomy group with 90% patients experiencing it, which was very less in banding group with only 6.7% of patients having pain. Bleeding occurred in 36.7% of the patients in haemorrhoidectomy group, while it occurred in 16.7% of banding group and 10% of MIPH group. Retention of urine was seen in 13.3% of patients in haemorrhoidectomy group and just 1 patient (3.3%) had retention of urine in MIPH group. Hospital stay was more in haemorrhoidectomy group which was 3.8 days, and 1.1 days in MIPH group. The procedure of banding is essentially a day care procedure with only 1 day. Recurrence was comparable among all the three groups with banding showing 10%, MIPH 6.7%, and haemorrhoidectomy 3.3%.

CONCLUSION

In conclusion haemorrhoids have a male preponderance. It usually occurs mostly in the mid 40 years of age. Bleeding is one of the commonest modes of presentation, with straining, hard stools and pain being others. MIPH has least postoperative complication like bleeding and less hospital stays and least recurrence. Haemorrhoidectomy has more postoperative complication like pain, bleeding and more hospital stay. Banding has less postoperative complication, but should be done in appropriately selected cases. The recurrence rate was slightly more in banding.

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