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Original Research Article

A Comparative Study of Various Management in Haemorrhoids – Sclerotherapy, Haemorrhoidectomy and MIPH

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Abstract:

Introduction: Haemorrhoids, or piles, are common anorectal issues affecting many people globally.

AIM: To evaluate the clinical presentation, grading, and efficacy of various surgical procedures in the management of haemorrhoids.

Methodology: A study was carried out, and it included 62 indoor haemorrhoid disease patients who will undergo sclerotherapy, MIPH, and haemorrhoidectomy in the Department of General Surgery at RNT medical college, and associate Maharana Bhopal Government, hospital Udaipur Rajasthan During the period of Sept 2023 to July 2024.

Result: In our study of 62 patients with varying grades of haemorrhoids, Grade III was most prevalent, with MIPH being the most common surgical treatment, leading to quicker recovery and lower pain compared to conventional methods.

Conclusion: In conclusion, early Grade I and II haemorrhoids can be effectively managed conservatively, while late Grade II, Grade III, and IV necessitate surgical intervention, with MIPH providing a less painful and quicker recovery option than conventional surgery.

Keywords: Haemorrhoids, Surgical Procedures, Management.

Introduction

Haemorrhoids, or piles, are common anorectal issues affecting many people globally. They result from the abnormal displacement of anal cushions, which are vital for maintaining faecal continence. When these cushions enlarge or prolapse, they can lead to symptoms such as bleeding, pain, itching, and discomfort, significantly affecting quality of life [1]. The term "haemorrhoid" comes from Greek, meaning "blood flow," highlighting bleeding as a primary symptom, while "piles" originates from Latin, meaning "a ball," reflecting the condition's appearance [2].

Haemorrhoids develop due to various factors, including chronic constipation, straining during bowel movements, pregnancy, aging, and a sedentary lifestyle. While not life-threatening, they can be debilitating, impacting daily activities and leading to economic burdens from lost productivity and healthcare costs [3]. Treatment options have evolved over time, ranging from early methods like suppositories and leeches to surgical interventions, which were recommended by Hippocrates in his writings [4]. Managing haemorrhoids involves a variety of treatment options, ranging from conservative measures like dietary changes and topical treatments to minimally invasive procedures and surgical interventions. The appropriate treatment choice depends on the severity of the condition, symptoms, and patient preferences [5]. This study evaluates patients with haemorrhoids treated using various modalities, including sclerotherapy, open and closed haemorrhoidectomy, and MIPH, to compare their efficacy [6].

Sclerotherapy, a commonly used minimally invasive option, involves injecting a sclerosing agent into the hemorrhoidal tissue, leading to its shrinkage. While it is generally safe and effective for early-stage haemorrhoids, concerns about its long-term efficacy and potential for recurrence persist [7]. For advanced cases of haemorrhoids or when minimally invasive treatments fail, surgical intervention, such as haemorrhoidectomy, may be recommended. This procedure involves the excision of hemorrhoidal tissue and is considered the gold standard for advanced-stage haemorrhoids, particularly those with significant prolapse or recurrent

symptoms. However, it comes with a longer recovery period and potential complications like postoperative pain and bleeding [8]. Recently, minimally invasive procedures such as MIPH (Transanal Hemorrhoidal Dearterialization) have gained popularity. MIPH involves ligating the hemorrhoidal arteries and repositioning the prolapsed tissue. While it has shown promising efficacy, safety, and patient satisfaction, its long-term outcomes and recurrence rates are still under evaluation [9,10].

Aim

To evaluate the clinical presentation, grading, and efficacy of various surgical procedures in the management of haemorrhoids.

Methodology

A study was carried out, and it included 62 indoor haemorrhoid disease patients who will undergo sclerotherapy, MIPH, and haemorrhoidectomy in the Department of General Surgery at RNT medical college, and associate Maharana Bhopal Government, hospital Udaipur Rajasthan During the period of Sept 2023 to July 2024. This study will be undertaken after approval from the ethical committee and obtaining informed written consent from the patients.

This study will include patients aged 20 to 60 years who present with symptomatic haemorrhoid disease. Patients with recurrent haemorrhoids, those diagnosed with hepatic cirrhosis or portal hypertension (secondary causes of haemorrhoids), pregnant women with secondary haemorrhoids, and individuals with coagulation disorders or those taking anticoagulant medications will be excluded from the study.

Result

Table 1: Age Distribution

Age In Years	No Of Patients	Percentage
20-30 years	7	11.29%
31-40 years	20	32.25%
41- 50 years	18	29.03%
51 – 60 yrs.	17	27.41%

In our study group, the age of the patients varies from 21-60 years. The most common age group is 31-40 years comprising 32.25%of cases. The combined mean age is 43.29 years.

Table 2: Proctoscopy Finding

Degree of Haemorrhoids	Cases	
	No.	%
I	11	17.74
II	13	20.96
III	21	33.87
IV	17	27.41

In our study out of 62 cases in proctoscopy finding 11(17.74%), cases grade I, 13(20.96%) cases grade II, 21(33.87%) cases grade III and 17(27.41%) cases grade IV

Table 3: Lab Investigations

Blood Investigations	Hb <10mg/dl		WBC < 4k - >11k		PT INR (Deranged)	
	NO.	%	NO.	%	NO.	%
Grade I	7	11.29%	2	3.22%	N	0
Grade II	7	11.29%	1	1.61%	2	3.22%
Grade III	11	17.74%	3	4.83%	N	0
Grade IV	9	14.51%	3	4.83%	N	0

In our study of 62 patients, 34 (54.83%) had haemoglobin levels below 10 mg/dl, with the highest incidence in Grade III (11 cases, 17.74%) and Grade IV (9 cases, 14.51%). Abnormal white blood cell counts were most common in Grades III and IV (3 cases each, 4.83%), while 28 patients (45.16%) had haemoglobin levels above 10 mg/dl

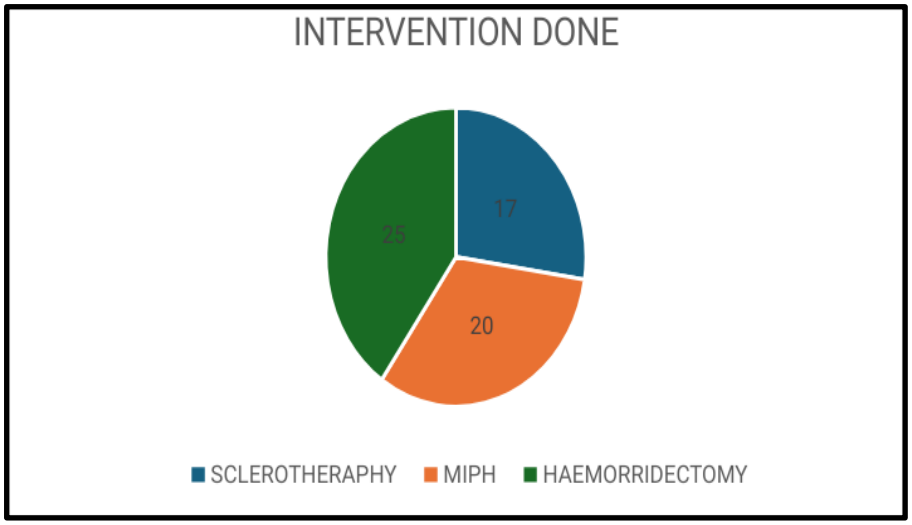

Figure 1: Interventions Done

In present study out of 62 cases 17(27.41%) cases undergo sclerotherapy, 20(32.25%) cases undergo MIPH, 25 (40.32%) cases undergo haemorrhoidectomy.

Table 4: Mode of Treatment and Degree of Haemorrhoids

Degree Of Haemorrhoids	Total No. Of Cases	Mode Of Treatment					
		SCL		MIPH		Haemorrhoidectomy	
		No.	%	No.	%	No.	%
I	11	11	17.74%	0	0	0	0
II	13	6	9.67%	7	11.29%	0	0
III	21	0	0	11	17.74%	10	16.12%
IV	17	0	0	2	3.22%	15	24.19%

In this study of 62 cases, 11 (17.74%) had grade I haemorrhoids treated exclusively with sclerotherapy, while 13 (20.96%) with grade II haemorrhoids received either sclerotherapy (6 cases) or MIPH (7 cases). Among the 21 (33.87%) grade III cases, 11 were treated with MIPH and 10 with haemorrhoidectomy, and of the 17 (27.41%) grade IV cases, 2 were treated with MIPH and 15 with haemorrhoidectomy.

Table 6: Postoperative Findings

Post Op Complication	Sclerotherapy	MIPH			Haemorrhoidectomy			Post Op Complication
		D1	D3	D7	D1	D3	D7	
Pain	6	12	2	-	18	4	0	Pain
Bleeding	2	4	0	-	8	0	0	Bleeding
Return To Daily Activity	17	18	2	-	22	3	0	Return To Daily Activity
Wound Infection	-	-	-	-	0	5	2	Wound Infection

In this study, 17 patients underwent sclerotherapy, with 6 (35.29%) reporting a pain score of 4 or higher postoperatively and 2 (11.76%) experiencing bleeding, but all returned to daily activities on day one.

Among the 20 patients treated with MIPH, 12 (54.55%) had a pain score of 4 or higher, 4 (18.18%) experienced bleeding, and 18 (81.82%) resumed daily activities on day one. Of the 25 patients who had haemorrhoidectomy, 18 (72%) reported a pain score of 4 or higher, 8 (32%) had bleeding, and while 22 (88%) returned to daily activities on day one, 4 (16%) experienced pain and 5 (20%) had wound infections by day three.

Discussion

In our study group, the age of the patients varies from 21-60 years. The most common age group is 31-40 years comprising 32.25%of cases. The combined mean age is 43.29 years. Kumar et al. (2021) [11] Age distribution shows a Gaussian distribution with a peak incidence between 45-65 years with subsequent decline after 65 years with a mean age of 42.39 years. In our study of haemoglobin levels below 10mg/dl, Grade III shows the highest incidence with 11 cases (17.74%), followed by Grade IV with 9 cases (14.51%). Grades I and II both have 7 cases each, representing 11.29% of their respective groups. Regarding abnormal white blood

cell counts (either below 4k or above 11k), Grades III and IV both report 3 cases each (4.83%), while Grade I has 2 cases (3.22%), and Grade II shows the lowest incidence with 1 case (1.61%). Deranged PT INR is only observed in Grade II, with 2 cases (3.22%).Our study finding correlates with Kappikeri et al.(2020) [12] in this study out of 50 cases, 9 (18.0%) cases were Grade 1; 10 (20%) cases were Grade 2; 10 (20%) cases were Grade 3; 10 (20%) cases were Grade 4 internal haemorrhoid. Kumar et al. (2021) [11] study observed that the majority of patients also belong to Grade III: 59.5% haemorrhoids followed by Grade IV: 22.34% and then Grade II: 18.08%.

In this study, proctoscopy was done at the time of admission out of 62 cases, 17(27.41%) cases underwent sclerotherapy, 20(32.25%) cases underwent MIPH, 25 (40.32%) cases underwent MM haemorrhoidectomy. With comparison to Gupta et al. (2019), they included 60 patients of grade III and IV haemorrhoids which were randomly divided into two groups of 30 patients each. group. Group A was offered Conventional Open Miligan-Morgan Haemorrhoidectomy (50%) and Group B underwent MIPH 50%).

In present study, a total of 62 cases, 11 cases (17.74%) had grade I haemorrhoids, all cases were treated with sclerotherapy, 13 cases(20.96%) had grade II haemorrhoids, among these cases, 6(46.15%)cases treated with sclerotherapy and rest 7(53.84%)cases treated with MIPH, 21(33.87%) cases had grade III haemorrhoids, 11(52.38%)case treated with MIPH, and rest 10(47.62%)cases treated with haemorrhoidectomy, 17(27.41%)cases had grade IV haemorrhoids, 2(11.76%)case treated with MIPH, and rest 15(88.24%)cases treated with haemorrhoidectomy.

According to Choudhary et al. (2020) [13] In their study, they managed conservative treatment for grade I and grade II haemorrhoids in 5 and 3 patients respectively. Sclerotherapy was done in 1 patient in grade I and 7 patients in grade II. MIPH was used in 6 cases, which 4 cases of grade III and 2 cases of grade IV haemorrhoids without complication. Haemorrhoidectomy was the most frequently used treatment overall, with 19 cases including 3 cases of grade II, 7 cases of grade III and 9 cases of grade IV.

In the present study, 17(27.42%) patients were given sclerotherapy, postoperatively 6(35.29%) had pain, 2(11.76%) bleeding, and all patients returned to daily activity on day one. Sclerotherapy is suitable for early haemorrhoids in the initial stages of grades 1 and 2 and for patients who are not surgically fit. The relief of symptoms is minimal. The rate of recurrence is very high. Not a definitive modality of treatment. In this study, 20(20.25%) patients operated with MIPH, postoperatively 12(54.55%) patients had pain, 4(18.18%) bleeding and 18(81.82%) patients returned to daily activity on day one, 2(9.09%) patients had pain and all patients returned to daily activity on day three. In comparison to Kumar et al. (2021) [11] their study postoperative pain score was maximum at 0 weeks (VAS score 5.64±1.25) in the MM group, which later decreased in the following weeks and at 12 weeks (VAS1.16±0.8) which led to patient's morbidity and delayed return to work in this group. In MIPH pain score at 0 weeks was 3.5±1.32, which was less as compared to MM. Another important complication seen in patients in the immediate postoperative period (at 0 weeks) was per rectal bleeding, more in MM 60% which was statistically significant (p-value <0.001), followed by MIPH 29%. At 1 week per rectal bleeding was 28% in MM and 25% in MIPH. The wound infection rate in their study was higher in MM at 0 weeks and 1 week because the wound was left open to heal by secondary intention which significantly decreased in later weeks. Although the wound infection rate was minimal in MIPH.

Conclusion

In this comparative study of haemorrhoid management, we concluded that Grade I and early Grade II haemorrhoids can be managed conservatively, while late Grade II, Grade III, and IV require surgical intervention. Sclerotherapy is effective for Grades I and II, offering outpatient convenience, fewer complications, and cost-effectiveness. MIPH is a minimally invasive option with reduced surgery duration, postoperative pain, and quicker recovery compared to conventional surgery. Although MM haemorrhoidectomy is the gold standard for treating prolapsed haemorrhoids, it comes with higher postoperative pain and longer recovery times.

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