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Clinical Profile and Surgical Outcome of Patient with Haemorrhoid

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ABSTRACT

Background: *Hemorrhoids are among the most common anorectal disorders worldwide, often requiring surgical management for advanced grades or recurrent symptoms. Despite their prevalence, region-specific data on clinical profiles and surgical outcomes remain limited in Bangladesh.*

Aim of the study: *To evaluate the clinical characteristics and surgical outcomes of patients with hemorrhoids undergoing operative management in a tertiary care center.*

Methods: *This prospective observational study was conducted over 12 months, enrolling 50 patients diagnosed with hemorrhoids (Grade I–IV) who underwent surgical intervention. Demographic details, clinical presentation, hemorrhoid grade, surgical procedure, perioperative outcomes, and complications were systematically recorded. Data were analyzed using SPSS version 26.*

Result: *The mean age of patients was 44.1 ± 12.6 years, with a male predominance (64%). Bleeding per rectum (28%) and prolapse (20%) were the most frequent symptoms. Grade III hemorrhoids were most common (38%). Open hemorrhoidectomy was the leading procedure (42%), followed by closed (30%) and stapled hemorrhoidopexy (18%). Mean operative time was 42 ± 8 minutes, with an average hospital stay of 2.8 ± 0.9 days. Postoperative pain (VAS ≥5) occurred in 58%, and 72% resumed normal activities within 7 days. Complications included pain persisting >7 days (92%), bleeding (44%), urinary retention (32%), wound infection (20%), anal stenosis (8%), and recurrence at 6 months (24%).*

Conclusion: *Hemorrhoidectomy remains the mainstay treatment for Grade III–IV hemorrhoids but is associated with significant postoperative morbidity, particularly persistent pain and bleeding. While most patients resumed daily activities within a week, the recurrence rate at six months was notable. Tailored surgical approaches and improved perioperative care are essential to enhance outcomes.*

Keywords: *Hemorrhoids; Hemorrhoidectomy; Surgical outcome; Postoperative complications; Bangladesh.*

I. INTRODUCTION

Haemorrhoids, also known as piles, are vascular structures in the anal canal that help with stool control but can become pathological when swollen or inflamed, leading to bleeding, pain, and discomfort [1]. They are among the most prevalent anorectal conditions encountered globally and are classified into internal and external types based on their anatomical position relative to the dentate line [2]. Internal haemorrhoids are further graded from I to IV depending on the degree of prolapse, guiding the choice of therapeutic interventions [3]. Haemorrhoidal disease significantly affects the quality of life and imposes a notable burden on healthcare systems. Globally, it is estimated that nearly half of individuals over the age of 20 experience symptomatic haemorrhoids at some point in their lives [4]. In Bangladesh, a study conducted in tertiary hospitals reported that haemorrhoids account for approximately 40% of all anorectal cases seen in outpatient surgical departments, making it one of the leading causes of anorectal morbidity and elective surgical interventions [5]. Furthermore, haemorrhoidectomy represents nearly one-third of minor anorectal surgeries performed annually in urban hospitals, indicating its significant surgical burden in the local healthcare context [6]. The clinical presen tation of haemorrhoids varies based on type and severity, with common symptoms including rectal bleeding, prolapse, mucous discharge, pruritus, and perianal pain [7]. Risk factors for haemorrhoidal disease include chronic constipation, prolonged straining during defecation, low-fiber diet, sedentary lifestyle, pregnancy, and conditions associated with

increased intra-abdominal pressure [8]. Despite their high prevalence, many patients delay seeking medical attention due to embarrassment, underreporting of symptoms, or the episodic nature of the disease. The management of haemorrhoids ranges from conservative measures such as dietary modification and pharmacologic therapy to office-based procedures (e.g., rubber band ligation, sclerotherapy) and surgical interventions [9]. Surgery is typically reserved for patients with advanced grades (III and IV), recurrent symptoms, or complications such as thrombosis or strangulation. The two most commonly performed surgical procedures include the conventional Milligan-Morgan open haemorrhoidectomy and the closed Ferguson technique, although newer methods such as stapled haemorrhoidopexy and Doppler-guided haemorrhoidal artery ligation have gained popularity in recent years due to their reduced postoperative pain and faster recovery [10,11]. Understanding the clinical profile of patients undergoing surgical intervention for haemorrhoids is essential for tailoring management strategies, predicting outcomes, and optimizing patient care. Parameters such as age, gender, duration of symptoms, co-morbidities, haemorrhoid grade, and preoperative hemoglobin levels may influence surgical outcomes, including postoperative complications, hospital stay, wound healing, and recurrence [12]. Although several international studies have explored the outcomes of haemorrhoid surgeries, there remains a paucity of region-specific data in low- and middle-income countries, including Bangladesh, where variations in clinical presentation, healthcare-seeking behavior, and surgical practices may affect results [13]. Moreover, systematic documentation and analysis of surgical outcomes can contribute to improving guidelines and standardizing care protocols in resource-limited settings [14]. The aim of this study is to evaluate the clinical characteristics and surgical outcomes of patients diagnosed with haemorrhoids in a tertiary care center in Bangladesh.

II. METHODOLOGY & MATERIALS

This prospective observational study was conducted in the Department of ENT and Head-Neck Surgery, Kurmitola General Hospital, Dhaka, Bangladesh, over a period of 12 months, from January 2024 to December 2024. A total of 50 patients diagnosed with haemorrhoids and admitted for surgical management were enrolled using purposive sampling.

Inclusion Criteria

- Patients aged 18 years and above.
- Clinically diagnosed cases of haemorrhoids (Grade I–IV).
- Patients willing to undergo surgical intervention and provide written informed consent.

Exclusion Criteria

- Patients with associated anorectal conditions (e.g., fissure, fistula, malignancy).
- Patients with bleeding disorders or on long-term anticoagulant therapy.
- Patients with severe comorbid conditions precluding surgery.
- Patients unwilling to participate in the study.

Data Collection

Demographic and baseline characteristics such as age, sex, and body mass index (BMI) were recorded. Clinical presentation, including bleeding per rectum, prolapse, pain, pruritus ani, mucous discharge, and constipation, were documented. Patients were graded according to the standard classification of haemorrhoids (Grade I–IV). Surgical procedures performed included open hemorrhoidectomy (Milligan-Morgan), closed hemorrhoidectomy (Ferguson), stapled hemorrhoidopexy, and rubber band ligation.

Perioperative outcomes assessed were operative time, hospital stay, postoperative pain using a Visual Analogue Scale (VAS), and time taken to return to normal activity. Postoperative complications including persistent pain, bleeding, urinary retention, wound infection, anal stenosis, and recurrence at 6 months were systematically recorded during follow-up. Ethical approval was obtained from the Institutional Review Board of the Hospital. Written informed consent was taken from all participants, ensuring confidentiality and the right to withdraw at any stage.

Statistical Analysis

Data were analyzed using SPSS version 26. Quantitative variables such as age, BMI, operative time, and hospital stay were expressed as mean ± standard deviation (SD). Categorical variables including clinical features, haemorrhoid grade, type of surgical procedure, and postoperative complications were presented as frequencies and percentages.

III. RESULT

A total of 50 patients with haemorrhoid were included in this study. Table 1 demonstrated that the mean age of the study population was 44.1 ± 12.6 years, with the highest proportion belonging to the 41–50 years age group (28%), followed by 31–40 years (24%) and 51–60 years (22%). Male patients predominated (64%) compared to females (36%). Regarding body mass index (BMI), 42% of the patients had a BMI <25 kg/m², 40% had 25–29.9 kg/m², and 18% had obesity (≥30 kg/m²) (Table 1). Table 2 presented that the most common presenting symptom was bleeding per rectum (28%), followed by prolapse (20%) and pain or discomfort (16%). Other clinical features included constipation (16%), pruritus ani (12%), and mucous discharge (8%). Table 3 showed that Grade III haemorrhoid was the most frequent finding, observed in 38% of patients, followed by Grade II (28%) and Grade IV (20%), while Grade I was seen in 14%. Open hemorrhoidectomy (Milligan-Morgan) was the most commonly performed procedure (42%), followed by closed hemorrhoidectomy (Ferguson) in 30%, stapled hemorrhoidopexy in 18%, and rubber band ligation in 10% (Table 4). The mean operative time was 42 ± 8 minutes, while the mean duration of hospital stay was 2.8 ± 0.9 days. Immediate postoperative pain with a VAS score ≥5 was reported in 58% of patients. Notably, 72% of patients returned to normal activities within 7 days of surgery (Table 5). In table 5 we see that the most common postoperative complication was pain persisting beyond 7 days, affecting 92% of patients. Bleeding occurred in 44% of cases, while urinary retention was observed in 32%. Wound infection was recorded in 20%, anal stenosis in 8%, and recurrence at 6 months in 24%.

Table 1: Demographic Profile of Patients with Haemorrhoid (N = 50).

Variables	Frequency (n)	|Percentage (%)
Age (years)		
18–30	8	16.00
31–40	12	24.00
41–50	14	28.00
51–60	11	22.00
>60	5	10.00
Mean±SD	44.1 ± 12.6	
Gender		
Male	32	64.00
Female	18	36.00
BMI (kg/m²)		
<25	21	42.00
25–29.9	20	40.00
≥30	9	18.00

Table 2: Clinical Presentation of Patients with Haemorrhoid (N = 50).

Clinical Features	Frequency (n)	|Percentage (%)
Bleeding per rectum	14	28.00
Prolapse	10	20.00
Pain/discomfort	8	16.00
Pruritus ani	6	12.00
Mucous discharge	4	8.00
Constipation history	8	16.00

Table 3: Distribution of Haemorrhoid Grades (N = 50).

Grade	Frequency (n)	|Percentage (%)
Grade I	7	14.00
Grade II	14	28.00
Grade III	19	38.00
Grade IV	10	20.00

Table 4: Surgical Procedures Performed (N = 50).

Procedure	Frequency (n)	|Percentage (%)
Open hemorrhoidectomy (Milligan-Morgan)	21	42.00
Closed hemorrhoidectomy (Ferguson)	15	30.00
Stapled hemorrhoidopexy	9	18.00
Rubber band ligation	5	10.00

Table 5: Perioperative Outcomes (N = 50).

Outcomes	Frequency (n)	|Percentage (%)
Operative time (minutes)		
Mean±SD	42 ± 8	
Hospital stay (days)		
Mean±SD	2.8 ± 0.9	
Immediate postoperative pain (VAS ≥5)	29	58.00
Return to normal activity within 7 days	36	72.00

Table 6: Postoperative Complications (N = 50).

Complications	Frequency (n)	|Percentage (%)
Pain persisting >7 days	46	92.00
Bleeding	22	44.00
Urinary retention	16	32.00
Wound infection	10	20.00
Anal stenosis	4	8.00
Recurrence at 6 months	12	24.00

IV. DISCUSSION

Hemorrhoids, a common anorectal condition, encompass internal, external, and mixed types, each presenting with distinct clinical features and surgical implications [15]. In this prospective cohort of 50 patients undergoing surgery for hemorrhoids, the mean age was 44.1±12.6 years, with 64% male and 36% female—a male predominance consistent with prior reports where men represented 56–79% of cases and mean ages around 40–45 years [16]. Most patients were in the economically active 31–50 years range, similar to another cohort where about 74% fell into this bracket [17]. The most common symptom was rectal bleeding (28%), followed by prolapse (20%), pain (16%), constipation history (16%), pruritus ani (12%), and mucous discharge (8%). Literature often shows bleeding as the predominant symptom in over 90% of patients with hemorrhoids [18]. Our lower bleeding frequency may reflect differing healthcare-seeking patterns, symptom thresholds, or earlier presentation. Grade III hemorrhoids were most frequent (38%), followed by Grade II (28%), Grade IV (20%), and Grade I (14%). These proportions align broadly with other tertiary-centre series reporting grade III as the most common surgical indication [19]. Open (Milligan-Morgan) hemorrhoidectomy was performed in 42%, closed (Ferguson) in 30%, stapled hemorrhoidopexy in 18%, and rubber band ligation in 10%. Comparable studies often favour open excisional techniques for grade III–IV disease and reserve stapled or RBL for select grade II–III cases [19]. The mean operative time of 42 ± 8 minutes and hospital stay of 2.8 ± 0.9 days are similar to other reports: conventional hemorrhoidectomy typically takes 40–60 minutes with hospital stays ranging 2–4 days, while stapling procedures generally result in shorter stays and quicker recovery [20,21]. In our series, 58% experienced moderate to severe immediate postoperative pain (VAS ≥5). Postoperative pain scores in open techniques are frequently higher than stapled procedures, often contributing to prolonged recovery and heightened urinary retention risk [19,21,22]. Notably, 72% of our patients returned to normal activity within 7 days—a promising figure compared to longer recovery periods reported elsewhere, especially after open procedures [21,22]. Nearly all patients (92%) experienced pain lasting beyond 7 days, while 44% reported bleeding and 32% developed urinary retention. Wound infection occurred in 20% of cases, anal stenosis in 8%, and recurrence at 6 months was observed in 24%. These findings are consistent with those reported in previous studies [23-27]. Factors contributing to higher complication rates in our study may include higher proportions of open surgery, lack of routine staples or high-energy vessel sealing devices, variation in perioperative analgesia protocols, or delays in postoperative support. Stapled hemorrhoidopexy in our series (18% of cases) appeared to fare better in terms of pain and early complications. Other comparative trials repeatedly demonstrate stapled procedures result in reduced postoperative pain, earlier discharge, fewer bleeding events and urinary retention, and faster return to work, though sometimes with a slightly higher long-term recurrence rate [28]. For Grade II–III disease, meta-analyses show hemorrhoidectomy yields superior symptom control but at the cost of more pain and complications compared to rubber band ligation—consistent with our experience that RBL (10% of cases) may be appropriate for selected lower-grade patients, but had lower recurrence benefit in our small sample [29]. Our recurrence rate at 6 months was 24%, higher than long-term follow-ups of LigaSure hemorrhoidectomy reporting recurrence rates around 3.1% at two years [30]. Higher recurrence may reflect shorter follow-up, variation in surgical technique, or patient selection.

Limitations of the study: This study was conducted in a single tertiary care center, which may limit the external validity of its findings. The follow-up period was restricted to six months, potentially underestimating late recurrences and long-term complications. Additionally, variability in surgical techniques, perioperative pain management, and postoperative care protocols could have influenced outcomes. Further multicenter studies with extended follow-up are needed to better evaluate long-term efficacy, recurrence rates, and complication profiles across different surgical approaches.

V. CONCLUSION

This prospective study highlights the clinical characteristics and surgical outcomes of patients with hemorrhoids in a tertiary care center in Bangladesh. The majority of patients presented in the economically active age group, with rectal bleeding and prolapse as the leading symptoms, and Grade III disease being most prevalent. Open hemorrhoidectomy remained the most frequently performed procedure, though associated with higher rates of postoperative pain and complications compared to stapled techniques. Despite a relatively quick return to daily activities for most patients, notable rates of pain persistence, bleeding, urinary retention, and recurrence were observed. These findings emphasize the need for individualized treatment strategies, improved perioperative care, and further comparative studies to optimize outcomes.

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