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AN INSTITUTIONAL AUDIT TO ASSESS THE COMPLICATIONS ASSOCIATED WITH VARIOUS TECHNIQUES OF HEMORRHOIDECTOMY IN A TERTIARY CARE HOSPITAL.

General Surgery

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ABSTRACT

One of the most common diseases of the anal region is hemorrhoidal disease which constitutes about 50% of colorectal investigations. This disease affects both males and females gender equally and can occur at any age. About 50-85% of people around the world suffer from hemorrhoids according to estimates. Hemorrhoids affect around 75% of the Indian population. This prospective study is being conducted in the Department of General Surgery CMCH Bhopal from November 2022 to February 2023. Operative & clinical records of all Hemorrhoid patients who underwent surgery were reviewed. All patients with hemorrhoids were admitted through OPD. Patients with other Anorectal diseases like fissures/fistula with hemorrhoids were excluded from the study. Detailed history. Clinical Examination & investigation were received complications of surgery were received (Intra operative & post-operative). Pain, urinary retention and bleeding remain the most common complications after surgery for hemorrhoids; however, special situations must be taken into account to choose the best technique to prevent more severe complications6.

KEYWORDS

INTRODUCTION

Anorectal disorders form a varied group of medical conditions that range from benign to serious disorders. The most common anorectal disorders include hemorrhoids, anal fistula, anal fissures, etc.

Hemorrhoids

Hemorrhoids are nonpathological vascular tissue cushions in the anal canal Pathologic and dilated changes in this hemorrhoidal tissue result in hemorrhoidal disease or piles. Vascular congestion and mucosal prolapse are the male causative factors for hemorrhoidal disease[1].

Epidemiology

One of the most common diseases of the anal region is hemorrhoidal disease which constitutes about 50% of colorectal investigations. This disease affects both males and females gender equally and can occur at any age. About 50-85% of people around the world suffer from hemorrhoids according to estimates. Hemorrhoids affect around 75% of the Indian population.

Pathophysiology Of Hemorrhoids

Hemorrhoids' exact pathogenesis is not well understood. The pathologic term for symptoms and an abnormal downward displacement of typical anal cushions at the moment is hemorrhoids[4]. The sliding anal cushions include aberrant haemorrhoid plexus dilatation and distortion due to damaging changes in the supporting connective tissue and improper blood circulation inside anal cushions. In individuals with haemorrhoids, the hemorrhoidal plexus was found to be hyperperfused, which suggests that the vascular tone inside the haemorrhoid tissue is dysregulated[3], according to a recent investigation of the architecture and hemodynamics of arterial supply to the anal canal. Moreover, it was clear that hemorrhoidal tissue had some inflammatory cells as well as recently developed microvessels. Hemorrhoids that prolapse circumferentially may be due to an internal rectal prolapse. In summary, although the exact pathophysiology of haemorrhoid development is unknown, it is believed to be multifactorial[4] and may involve the sliding anal cushion, hyperperfusion of the haemorrhoid plexus, vascular abnormalities, tissue inflammation, and internal rectal prolapse (rectal redundancy). Different techniques to treating haemorrhoids may result from differing theories of how they develop[4].

Classification

Depending on their location, hemorrhoids are classified into two categories, viz, internal and external.

Internal hemorrhoids

Internal hemorrhoids, located proximal to the dentate line, are covered by columnar transitional epithelium internal hemorrhoids are further subcategorized based on the degree of prolapse (Figure 2) as follows:

- First degree: On straining, this type of hemorrhoid can prolapse beyond the dentate line, bulging out of the anal canal and can cause bleeding.
- Second degree: This type of hemorrhoid can prolapse through the anus and can improve by itself.
- Third degree: This type of hemorrhoid prolapses through the anal canal and needs to be reduced manually.
- Fourth degree: This type of hemorrhoid is at risk of strangulation and is not reducible.

External Hemorrhoids

These are located distal to the dentate line and are covered by anoderm. External hemorrhoids are generally sensitive to temperature, touch, and stretch due to somatic nerve innervations.

Causes And Risk Factors

Multiple factors have been proposed for hemorrhoids. The most likely factors hemorrhoids are prolonged sitting & staining during deflection, constipation hard stool, lack of fiber diet, inadequate water intake, obesity, pregnancy, ascites heredity

Diagnosis And Management

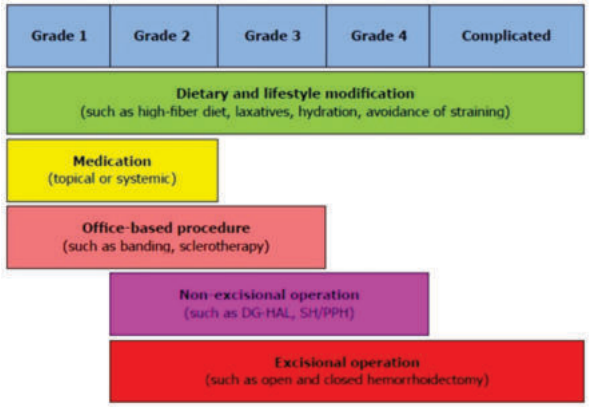

Figure 1: *Management Protocol Of Hemorrhoids*[5].

Diagnosis of hemorrhoids is based on a thorough examination of the anorectal area. Other diagnostic tests include digital, anoscopic, and sigmoidoscopic examinations. Management of hemorrhoidal disease is divided into two treatment categories, namely medical and surgical. The medical treatment primarily involves a conservative approach, recommending an increased intake of dietary fibre and fluids, reduced straining while defecating, and use of sitz baths 2-4 times a day. If these are not successful, OPD-based treatment of grades I to III internal hemorrhoids with rubber band ligation is the preferred next step because it has a lower failure rate than infrared photocoagulation[2]. The empirical treatment approach involves over-the-counter medications and suppositories mainly focused on symptomatic relief. Surgical treatment involves Milligan Morgan Hemorrhoidectomy, Fergusson Hemorrhoidectomy hemorrhoid artery ligation, and stapler hemorrhoidectomy.

AIM OF THE STUDY

1. Compare the differences in intra- operative complications during various surgical techniques.
2. Compare the differences in Post Operative complications. complications during various surgical techniques.

MATERIAL AND METHOD

This prospective study is being conducted in the Department of General Surgery CMCH Bhopal from November 2022 to February 2023. Operative & clinical records of all Hemorrhoid patients who underwent surgery were reviewed. All patients with hemorrhoids were admitted through OPD. Patients with other Anorectal diseases like fissures/fistula with hemorrhoids were excluded from the study. Detailed history. Clinical Examination & investigation were received complications of surgery were received (Intra operative & post-operative)

Inclusion Criteria

Patients with internal hemorrhoids Grade II to IV.

Exclusion Criteria

Patients with other Ano-Rectal Diseases with Hemorrhoids like – fistula/fissure/ Perianal abscess/ Rectal Prolapse

Technique

- Milligan Morgan Hemorrhoidectomy.
- Ferguson Hemorrhoidectomy.
- Hemorrhoid Ligation
- Stapler Hemorrhoidectomy.

Observation Table

Age Group	No. of Haemorroid cases
0-10 yrs	0
10-20 yrs	2
20-30 yrs	0
30-40 yrs	8
40-50 yrs	18
50-60 yrs	4
>60 yrs	2

	Male	Female	Total
Sex	26	8	34

	I	II	III	IV
Grades of Haemorrhoids	0	2(11.76%)	12(70%)	03(17.64%)

	Milligan Morgan Hemorrhoidectomy	Ferguson Hemorrhoidectomy	Hemorrhoid Artery Ligation	Stapler Hemorrhoidectomy
Surgery performed	10 (29.41%)	4 (11.76%)	12 (35.29%)	8 (23.52%)

	Milligan Morgan Hemorrhoidectomy	Ferguson Hemorrhoidectomy	Hemorrhoid Artery Ligation	Stapler Hemorrhoidectomy
Bleeding	2(20%)	-	2 (16.66%)	4(50%)
Intra Operative Events	-	-	-	2(25%) [misfired]
Technical difficulty				
Needle banding	-	-	4 (33.33%)	-
Arterial Puncture	-	-	2 (16.66%)	-
Vision Difficulty in c/o bleeding mucosa	-	-	2 (16.66%)	-
Post operative Comp.				
Pain	8 (80%)	2 (50%)	4 (33.33%)	2 (25%)
Delayed bleeding	2 (20%)	2 (50%)	2 (16.66%)	2 (25%)
Urinary retain	4 (40%)	2 (50%)	6 (50%)	4 (50%)
UTI	2 (20%)	-	2 (16.66%)	-
Fecal Impacts	-	-	-	-
Wound Infection	-	-	-	-
Anal Stenosis	2 (20%)	-	2 (16.66%)	-
Pelvic Sepsis	-	-	-	-
Anal Hypotonia	-	-	-	-

RESULTS:-

A total of 34 patients underwent Hemorrhoid surgery in the Department of General Surgery CMCH Bhopal during the study period.

The mean age of patients was 47 yrs.

Out of which 26 patients were male 76.4% and 8 were female (23.53%) Out of 34 patients 4 (11.7%) patients had Grade II, 24 patients (70.58%) had Grade III hemorrhoid and 6 patients (17.6%) has Grade IV hemorrhoids the mean age of patients was 47 years.

Out of 34 patients, 10 patients (29.4%) underwent Milligan Morgan Hemorrhoidectomy, 4 patients (11.7%) had Ferguson Hemorrhoidectomy, 12 patients (35.36%) underwent Hemorrhoid Artery Ligation and 8 patients (29.4%) had stapler hemorrhoidectomy.

Major complications we found was intra-operative bleeding in 8 patients out of 34 (23.6%) And post-operative main complication was found to be pain in 16 patient 47%. In stapler hemorrhoidectomy, 4 patients 50% had episodes of bleeding intra-operative which was managed by suture ligation in hemorrhoid Artery ligation 4 patients (11.7) patients had technical difficulty with needle bending 2 patients (5.8%) had artery puncture and vision difficulty in 2 (5.8%) patients. Post-operative pain 16 out of 34 patients (47%) patient had pain requiring up gradation of analgesics. In Milligan Morgan Hemorrhoidectomy 80% of patients had experienced pain in Hemorrhoid Artery Ligation 33% of patients in Ferguson Hemorrhoidectomy 50% of patients had pain and in stapler Patients only 25% had pain. Few patients had complaints of delayed bleeding 8 patients (23%) in Milligan Morgan Hemorrhoidectomy 25% of patients had delayed bleeding in Ferguson Hemorrhoidectomy 50% patent in Hemorrhoid Artery Ligation 18% in stapler 25% of patients had delayed bleeding.

Urinary Retention-

In 16 out of 34 patients (47%) 6 in Hemorrhoid Artery Ligation 50% and 2 in Milligan Morgan Hemorrhoidectomy (20%) patient (50%) 4 patients in Stapler Hemorrhoidectomy and 2 patients (50%) in Ferguson Hemorrhoidectomy had complaints of urinary retention which were managed by Foley's catheterization which was later in removed on next post-operative day and patient were comfortable.

UTI –

4 (11%) patients out of 34 % patients had complaints of UTI 16% of patients in Hemorrhoid Artery Ligation and 20% in Milligan Morgan Hemorrhoidectomy.

Fissure-

4 patient out of 34 operated patients have complaints of the fissure. 2 In Hemorrhoid Artery Ligation (16%) and 2 in Milligan Morgan Hemorrhoidectomy (20%).

The major complication we found intra-operative was Bleeding in 8 out of 34(23.4%).

The findings in this trial can be compared with a recent network meta-analysis,[7] of which included 98 trials of procedures for grade III and IV hemorrhoids in the analysis. The authors suggested that traditional excisional surgery was associated with fewer hemorrhoid recurrences and that stapled hemorrhoidopexy was associated with less postoperative pain and a higher rate of recurrence. However, the eTHoS trial refutes the data on higher complication rates, return to normal activity, length of operation, and length of stay in traditional excisional surgery. [8]

CONCLUSION-:

1. Males are more in our study compared to other studies.
2. Most Commonly in the age group of 40-50 years.
3. In Stapler Hemorrhoidectomy major complication is of bleeding in one case stapler misfired.
4. Pain is the most common problem in Milligan Morgan Hemorrhoidectomy.
5. Retention is most common in Hemorrhoid Artery Ligation

Pain, urinary retention and bleeding remain the most common complications after surgery for hemorrhoids; however, special situations must be taken into account to choose the best technique to prevent more severe complications[6].

REFERENCES:

1. Stratta E, Gallo G, Trompetto M. Conservative Treatment of Hemorrhoidal Disease. Rev Recent Clin Trials. 2021;16(1):87-90. doi: 10.2174/1574887115666201021150144. PMID: 33087033.
2. Mott T, Latimer K, Edwards C. Hemorrhoids: Diagnosis and Treatment Options. Am Fam Physician. 2018 Feb 1;97(3):172-179. PMID: 29431977.
3. Lohsiriwat V. Approach to hemorrhoids. Curr Gastroenterol Rep. 2013;**15**:332.
4. Lohsiriwat V. Hemorrhoids: from basic pathophysiology to clinical management. World J Gastroenterol. 2012;**18**:2009–2017.
5. World J Gastroenterol. 2015 Aug 21; 21(31): 9245–9252.
6. Romaguera VP, Sancho-Muriel J, Alvarez-Sarrdo E, Millan M, Garcia-Granero A, Frasson M. Postoperative Complications in Hemorrhoidal Disease and Special Conditions. Rev Recent Clin Trials. 2021;16(1):67-74. doi: 10.2174/1574887115666200406114218. PMID: 32250228.
7. Simillis C, Thoukididou SN, Slesser AAP, Rasheed S, Tan E, Tekkis PP. Systematic review and network meta-analysis comparing clinical outcomes and effectiveness of surgical treatments for haemorrhoids. *Br J Surg*. 2015;**102**:1603–1618.
8. Watson AJ, Hudson J, Wood J, Kilonzo M, Brown SR, McDonald A, Norrie J, Bruhn H, Cook JA; eTHoS study group. Comparison of stapled haemorrhoidopexy with traditional excisional surgery for haemorrhoidal disease (eTHoS): a pragmatic, multicentre, randomised controlled trial. Lancet. 2016 Nov 12;388(10058):2375-2385. doi: 10.1016/S0140-6736(16)31803-7. Epub 2016 Oct 7. Erratum in: Lancet. 2016 Nov 12;388(10058):2354. PMID: 27726951; PMCID: PMC5269572.