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Original Research Paper

General Surgery

A PROSPECTIVE STUDY OF POST OPERATIVE COMPLICATIONS AND ITS MANAGEMENT FOLLOWING OPEN HEMORROIDECTOMY

Dr. Vinoth Kumar	PostGraduate, Department of General Surgery Government Medical college hospital Cuddalore, [Erstwhile Rajah Muthiah Medical College], Annamalai Nagar, Chidambaram.
Dr. Gopikrishna*	M.S., Associate Professor, Department of General Surgery, Government Medical college hospital Cuddalore, [Erstwhile Rajah Muthiah Medical College], Annamalai Nagar, Chidambaram. *Corresponding Author
Dr. Prem Kumar	M.S., Assistant Professor, Department of General Surgery, Government Medical college hospital Cuddalore, [Erstwhile Rajah Muthiah Medical College], Annamalai Nagar, Chidambaram.
Dr. Baskaran	M.S., Professor, Department of General Surgery, Government Medical college hospital Cuddalore, [Erstwhile Rajah Muthiah Medical College], Annamalai Nagar, Chidambaram.

ABSTRACT

Background And Objectives Hemorrhoids are a very common anorectal condition. Surgical hemorrhoidectomy has a reputation for being a painful procedure for a fairly benign disease and is associated with various complications. The aim of the present study is to analyse the incidence of post-operative complications of hemorrhoidectomy and their management. **Method** Between November 2020 and November 2022, consecutive patients, both male and female, presenting with 3rd and 4th grade hemorrhoids and Failure of conservative treatment of second degree haemorrhoids were included in the study. Various Postoperative complications were studied. Postoperative pain was assessed through VAS. Bleeding was divided into early or late and based on amount of bleeding as slight or severe. Other post-operative complications like urinary retention, anal stenosis, fecal incontinence using Cleveland clinic incontinence score, local wound infection, fissures were noted. Management of the complications has been described. **Results** Total of 50 patients were assessed out of which 50 % experienced moderate pain and 22 % experienced severe pain. Urinary retention noted in 28 %. Early post-operative bleeding in 6% and late post operative bleeding in 12 % out of which one person needed surgical intervention and others treated conservatively. Anal complications like anal stenosis, fecal incontinence were notedin 2% of the patients. Local wound infection in 8% and no fissures were noted in the study group. **Conclusion** The most common complications were pain and urinary retention. Improper surgical technique can substantially increase morbidity. Postoperative morbidity is generally low after open hemorrhoidectomy and can further be reduced with meticulous surgical technique and repeated postoperative care. Early diagnosis and management of the postoperative complications are imperative in the management of patients undergoing open hemorrhoidectomy.

KEYWORDS :

INTRODUCTION

Hemorrhoids are one of the commonest and oldest ailments to afflict mankind. References occur in ancient texts dating back to Babylonian, Egyptian, Greek, and the Hebrew cultures. Included in many of these writings are multiple recommended treatment regimes such as anal canal dilatation, topical ointments, and the intimidating red hot poker. Although few people have died of hemorrhoidal disease, many patients wished they had, particularly after therapy. In recent times many techniques carrying various eponyms have been described.

Hemorrhoids are a very common anorectal condition defined as the symptomatic enlargement and distal displacement of the normal anal cushions. They affect millions of people around the world, and represent a major medical and socioeconomic problem.

There are 2 basic varieties open and closed hemorr hoidectomy depending on whether or not the anorectal mucosa and perianal skin closed after the hemorrhoids have been excised and ligated.

Options for hemorrhoidectomy include the techniques of Milligan-Morgan hemorr hoidectomy, closed Ferguson hemorrhoidectomy, Whitehead hemorrhoidectomy, and the stapled hemorrhoidectomy. Surgical hemorrhoidectomy has a reputation for being a painful procedure for a fairly benign disease and is associated with various other complications.

This prospective study is to evaluate the various post operative complications like post operative pain, Wound infections, Bleeding, Urinary retention, Anal incontinence, Anal stenosis, fissures and its management following hemorrhoidectomy.

MATERIALS & METHODOLOGY

Type of study: A Prospective study
Time frame of study : 2020 - 2023
Study Area.: RMMCH hospital Department of General Surgery

Methodology

This Prospective study of post operative complications and its management following open hemorrhoidectomy was conducted from the patient admitted in Rajah Muthiah Medical College and Hospital, Chidambaram from 2020-2023. The diagnosis of hemorrhoids was made on basis of history, physical examination, digital rectal examination and proctoscopy and the patient was graded accordingly. Written informed consent was taken from the patients.

All essential investigations were done to obtain fitness for surgery. This included Complete blood count, random blood sugar, blood urea, serum creatinine, ECG, routine urine analysis for sugar, albumin and microscopy, chest X ray and Ultrasound Abdomen & pelvis.

On obtaining fitness for surgery, these patient were subjected

to open hemorrhoidectomy (Milligan- Morgan hemorr hoidectomy)

Sample Size

Fifty patients were included in the study based on the inclusion and exclusion criteria as mentioned below:

Inclusion Criteria

1. Patient presenting with 3rd, 4th grade hemorrhoids
2. Failure of conservative treatment of 2nd degree hemorrhoids

Exclusion Criteria

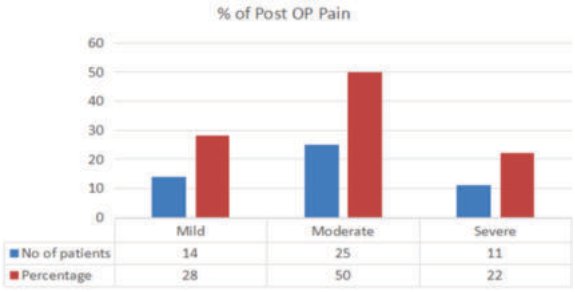
1. First degree haemorrhoids
2. Hemorrhoids with fissure in ano
3. Haemorrhoids with fistula in ano
4. Other anorectal pathology
5. Other co-morbid conditions such as portal hypertension, coronary artery disease , coagulation disorders.

RESULTS

The present study was carried out in the department of surgery in Rajah Muthiah Medical College and Hospital. Fifty cases of Grade 3, Grade 4 and failure of conservative management of Grade 2 hemorrhoids were included in the study after taking their consent. They were subjected to the open hemorr hoidectomy (Milligan – Morgan Hemorrhoidectomy). Evaluation of all the patients included in the study was done regarding the grade of hemorrhoids, post-operative complications including pain, bleeding, urinary retention, anal stenosis, wound infection, fecal incontinence and fissures. The patients were followed up at Post operative day 1,3,7 and one month, 3 months and after 6months

Table 4: Pain grade of patients studied

Pain	No. of patients	%
Mild	14	28%
Moderate	25	50%
Severe	11	22%
Total	50	100%



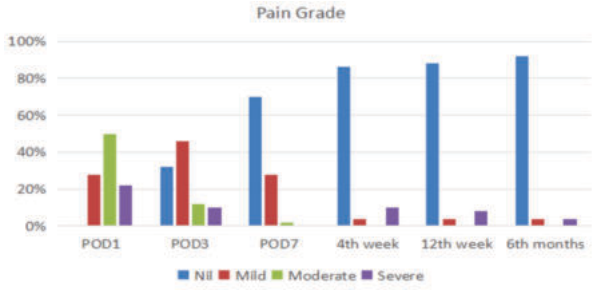
Graph 4: % of post op pain

Post-operative Pain is a fairly common occurrence after open hemorrhoidectomy. 50% of the study group experienced moderate pain and 22 % experience severe pain. The rest complained of mild pain.

Table 5: Evaluation of pain grade at different time points

Pain	POD 1	POD 3	POD 7	4th week	12th weeks	6th months	% change
Nil	0(0%)	16(32 %)	35(70 %)	43(86 %)	44(88 %)	46(92%)	92
Mild	14(28 %)	23(46 %)	14(28 %)	2(4%)	2(4%)	2(4%)	-25
Moderate	25(50 %)	6(12%)	1(2%)	0(0%)	0(0%)	0(0%)	-51
Severe	11(22 %)	5(10%)	0(0%)	5(10%)	4(8%)	2(4%)	-18

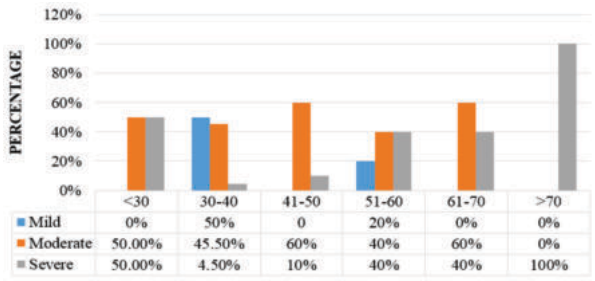
Improvement of 92.0% Pain grade is statistically significant. The intensity of pain gradually reduced for all the three pain groups. By POD 7, 70 % of the study group was pain free. By 6 months 92.0 % of the study group were completely pain free. The remaining patients had some complication associated with pain.



Graph 5: Evaluation of pain grade at different time points

Table 6: Correlation of Age distribution of patients studied with Post of Pain grading

Age in years	No of patients	Mild	Moderate	Severe
<30	2	0(0%)	1(50%)	1(50%)
30-40	17	8(50%)	8(45.5%)	1(4.5%)
41-50	10	3(30%)	6(60%)	1(10%)
51-60	10	4(40%)	4(40%)	2(20%)
61-70	10	2(20%)	6(60%)	2(20%)
>70	1	0(0%)	0(0%)	1(100%)

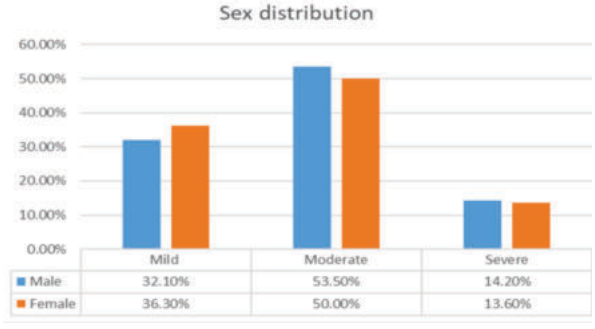


Graph 6: Correlation of Age distribution of patients studied with Post of Pain grading

Severity of pain experience by older people was more. The correlation of age distribution of patients studies with post op pain is significant, Fisher Exact test with a p value = 0.006.

Table 7: Correlation of sex distribution of patients studied with Post of Pain grading (POD 1)

Sex	No. of Patients	Mild	Moderate	Severe
Male	28	9(32%)	15(53%)	4(14.2%)
Female	22	8(36%)	11(50%)	3(13.6%)

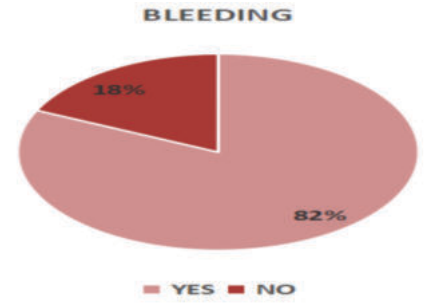


Graph 7: Sex distribution of patients

Correlation between males and females with post operative pain: out of the total 50 patients 52 % experienced moderate pain of which males had higher incidence at 53.5 % compared to 50.0 % in females

Table 8: Bleeding in patients studied

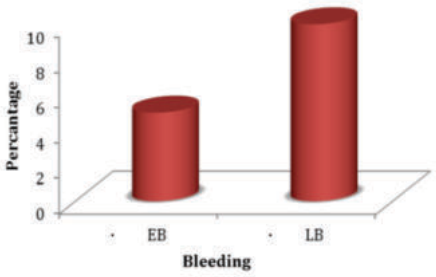
Bleeding	No of patients	Percentage
No	41	82%
Yes	9	18%
Early Bleeding	3	6%
Late Bleeding	6	12%



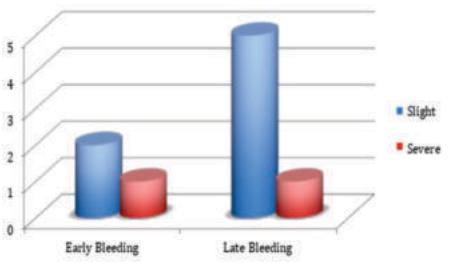
Graph 8: Bleeding in patients studies

Table 9: Distribution of the degree of bleeding

Bleeding	Slight	Severe
Early Bleeding	2	1
Late Bleeding	5	1
Total	7	2



Graph 9: Distribution of grades of bleeding



Graph – 10: Degree of bleeding

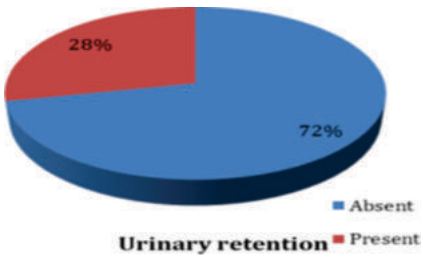
18% of the patients had a bleeding episode. 9 out of the fifty patients (18 %) had event of bleeding. Early bleeding that is within 24 hours was seen in 3 patients. Late bleeding occurred in 6 patients.

Out of the three patients with early bleeding 1 patient had severe bleeding about 8 hours after surgery. The patient was taken back to the operating theater for achieving hemostasis. The other 2 patients had slight bleeding which was treated conservatively.

Late bleeding occurred in 6 patients 3rd to 7th day. This was documented in the follow period of POD 7. 5 of the 6 patients had slight bleed which was controlled by anal packing. One patient had severe bleeding which was treated by anal packing with gelfoam and tamponading with a Foleys catheter

Table 11 (a): Urinary retention of patients studied

Urinary Retension	No. of patients	Percentage
Absent	36	72%
Present	14	28%
Total	50	100%



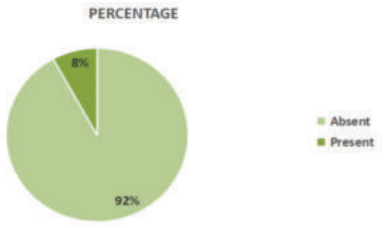
Graph 11 (a): Urinary retention in patients studied

Table 11(b): Sex distribution of patients with urinary retention

Urinary Retension	No. of patients	Percentage
Male	9	64.2%
Female	5	35.7%
Total	14	100%

Table 12: Wound infections of patients studied

Wound infection	No of patients	Percentage
Absent	46	92%
Present	4	8%
Total	50	100%



Graph 12: Wound infection in patients.

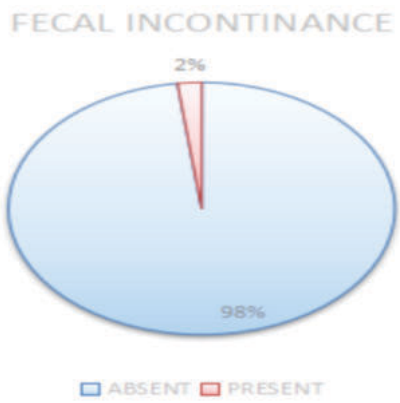
Wound infection was seen in 4 (8.0 %) of the 50 patients . 3 out of the four patients were female of which 2 of them were above 50 years of age. 2 patients developed late bleeding complication.

Wound infection was treated by Sitz bath, Antibiotics and local antiseptics.

One patient needed debridement.

Table 13: Fecal Incontinence of patients studied

Present	1	2%
Absent	49	98%
Total	50	100%



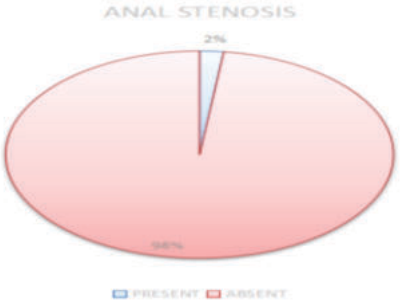
Graph 13: Fecal incontinence in patients studies

Fecal Incontinence notice in 2 % of the study group. One person ,who was a fifty year old male patient with grade 4 hemorrhoids, with a Cleveland clinic score of8. The

incontinence at the maximum at 4 weeks. Patient improved on medical management like Dietary changes and perineal exercises and loperamide.

Table 14: Stenosis of patients studied

Anal Stenosis	No. of patients	Percentage
Absent	49	98%
Present	1	2%
Total	50	100%



Graph 14 : Anal stenosis in patients studied

1 out of the fifty patients had Anal stenosis. Both of them had mild to moderate degree on clinical examination. They were treated by dietry modifications, bulking agents. Both the patients performed anal dilatation.

Table 15: Fissures of patients studied

Fissures	No. of Patient	Percentage
Absent	50	100%
Present	0	0
Total	50	100%

None of the patient developed fissures. This complications are treated wth Sitz bath, stool softeners and local application of nifidepine with lignocaine ointment.

Fissures were located at the posterior midline in both the cases. Fissures were associated with pain and constipation.

Since the dawn of surgical history, hemorrhoids have been a subject of interest, and their treatment has evolved through distinct stages. Hemorrhoids are a very common anorectal condition defined as the symptomatic enlargement and distal displacement of the normal anal cushions. They affect millions of people around the world, and represent a major medical and socioeconomic problem.

DISCUSSION

In this study hemorrhoids occurred at a mean age of 47.3 years prevalence being higher fourth decade of life. Gender distribution being 56% males to 44 % females. Of the patients studied 50 % had grade 4 hemorrhoids, 46.0 % had grade 3 hemorrhoids and 4 % had grade 2 hemorrhoids. Amongst these patients 68.0 % presented with hemorrhoidal mass at all 3 positions and 26.0 % presented with hemorrhoidal mass at two of the three positions.

Arbman Gunner et al., 117 study reported a mean age of 48.5 year and sex incidence of male 62.34% and females 37.6%Ho Y.H et al., 118 study reported a mean age of 45 years and sex incidence of 52.2 % males and 47.8 % females

Summary

The present clinical study includes details of 50 patients admitted in Rajah Muthiah Medical College and Hospital between November 2020 to November 2022 who underwent open hemorrhoidectomy (Milligan- Morgan) and the various complications that followed the surgery and the management of these complications.

The highest incidence of hemorrhoids was seen in the 4th decade of life, Males more than females. Grade 4 hemorrhoids were more commonly encountered.

1. Pain was the most common complication. 50 % experienced moderate degree pain and 21.7 % experienced severe pain. Moderate pain was managed by giving NSAID. Patients with severe pain received Tramadol along with NSAID. Dosing based on demand of the patient.

2. Urinary retention was the second most common complication. 28% of the patients had urinary retention. Higher incidence noted in males. Urinary retention was managed by per urethral catheterization with a self-retaining Foley catheter for 24 hours.

3. Overall bleeding was noticed in 18 % of the patients. Early bleeding that occurred within 24 hours of surgery occurred in 3 people of which one had severe bleeding and had to be take back to the operating room to achieve hemostasis. The rest managed conservatively. Late bleeding occurred in 10 % of the patients. All were managed conservatively by anal packing, tamponading with Foley Catheter.

4. Local Wound infection was present in 8.0 % of the patients. Ranging from mild induration to presence of slough. One patient needed debridement, others improved with conservative treatment (Sitz bath, antibiotic and local antiseptics).

5. In this present series 2% (1) out of the sixty patients had Anal stenosis. Both had mild to moderate degree on clinical examination. They were treated by dietary modifications, bulking agents. Both the patients were initiated on manual anal dilatation and showed considerable improvement.

6. In the present series 1 (2%) patient had fecal incontinence with a Cleveland clinic incontinence score of 8. Patient improved on medical management like Dietary changes and perineal exercises and loperamide.

7. No patient had a complication of fissure

From the above data we can summarize the post op complications pain and urinary retention are common in the early post-operative period. Severe bleeding within the first 24 hours is usual due to slippage of the pedicle ligature and such patients should be taken back to the operating room immediately. Slight bleeding early or late can be managed conservatively. Late anal complications like anal stenosis occurred in 2% and fecal incontinence occurred in 2 % of the study group. Anal stenosis in both the patients was mild to moderate degree which were managed by manual dilatation and stool bulking agents. Fecal incontinence in one patient was moderate degree and was treated conservatively. Local wound infection a developed in 8.0% of the study subjects

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