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Original Research Article

A comparative study of closed versus open haemorrhoidectomy

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ABSTRACT

Background: Haemorrhoids, commonly called piles, are small, round, fleshy bumps that contain enlarged blood vessels, and are found around your anus or in your anal canal. They are associated with an increased pressure in your blood vessels in and around your anus causing them to become inflamed and swollen. It is thought that irritable bowel syndrome (IBS) may contribute to haemorrhoids developing around the anus as it can cause constipation and diarrhoea that lead to unusual straining during bowel movements.
Methods: In the present study 60 cases of 2nd and 3rd degree haemorrhoids were chosen with complaints of bleeding per rectum, pain during defecation, mass per rectum, discharge and irritation. A detailed history of each patient was taken, and the data entered in the proforma.
Results: Present study given 86% of cases good healing after six weeks of treatment. Open haemorrhoidectomy showed healing in 43% of cases and closed haemorrhoidectomy showed healing in 73 % cases after 3 weeks of treatment in present study.
Conclusions: The results of the study concluded that post-operative pain was less in closed haemorrhoidectomy with early wound healing.

Keywords: Anal canal, Bowels, Constipation, Diarrhea, Haemorrhoids

INTRODUCTION

Hemorrhoids are one of the most common ailments to afflict mankind, but it is impossible to give an accurate figure for their prevalence. Although many patients present with symptomatic disease, many do not and some never have symptoms, whether such individuals can be considered to have a disease must remain a moot point. Haemorrhoids have plagued humans since they attained the erect posture. The word 'haemorrhoid' is derived from Greek word haimarhoos, meaning flowing of blood (haima=blood, rhoos=flowing).[1-10]

The word 'piles' comes from Latin word pila meaning a pill or ball. To be accurate, we should call the disease as piles when the patient complains of a swelling and 'haemorrhoids' when he or she complains of bleeding. The most common method of treatment of haemorrhoids is by haemorrhoidectomy which involves excision of pile mass, either by open haemorrhoidectomy (Milligan-Morgan) or closed haemorrhoidectomy (Ferguson) method. The aim of study is to compare closed v/s open haemorrhoidectomy regarding post-operative wound healing, pain and postoperative course.[11-17]

METHODS

In the present study 60 cases of 2nd and 3rd degree haemorrhoids were chosen with complaints of bleeding per rectum, pain during defecation, mass per rectum, discharge and irritation.

A detailed history of each patient was taken with personal history, family history, diet history with systemic examination of respiratory, cardiovascular, per abdominal examination to know any associated disease and to rule out any cause predisposing to haemorrhoids and local examination including proctoscopy was done as per proforrma made for the study and the data entered in the proforma. Investigations included haemoglobin, total count, differential count, erythrocyte sedimentation rate, blood sugar, bleeding time, clotting time, blood urea, serum creatinine and urine routine. Other investigations like Chest x-ray, electrocardiogram, sigmoidoscopy and colonoscopy were done only in selected cases.[18-22] The patients were explained in detail about their disease and the various modalities of treatment as Open haemorriodectomy, closed haemorrhoidectomy, rubber band ligation, cryotherapy, sclerotherapy with the advantages and disadvantages of each.

Willing patients were selected and examined and investigated as per proforma. Analysis was made on basis of percentages, mean, standard deviation, binomial probability tests.

Inclusion criteria

- Patients with complaints of bleeding per rectum, mass per rectum, pain, irritation, discharge per rectum. Patients with 2nd and 3rd degree hemorrhoids suitable for surgery.

Exclusion criteria

- Haemorrhoids associated with complications (ulceration, recurrent cases, strangulation).

Preoperative preparation

Patients were prepared the previous day, perianal region, perineum and back were shaved. 0.5 ml of tetanus toxoid injection was given intramuscularly, written consent was taken, Pre anaesthetic evaluation was done and a soap water enema was given the night before and on the morning of the surgery. Patients were kept nil orally from the previous night. Antibiotics were given on the day of surgery, before the procedure. Patient was explained about the effects and complications of the procedure.

RESULTS

In the present prospective study, the following data for clinical studies was obtained from S V S Medical College and Hospital, Mahabubnagar. 60 cases of symptomatic second and third-degree hemorrhoids cases were chosen during the period from August 2012 to August 2014.

Table- 1: Age and sex distribution.

Age in years	Male	Female	Total
< 30	12	08	20
31-40	12	05	17
41-50	18	-	18
>50	04	01	05
Total	46	14	60

In this study there are more number of cases seen below 30 yrs of age both in males and females with male predominance. In this study 76 % of the cases are male and 24% are females.

Presenting symptoms

The most common presentation in haemorrhiods are bleeding per rectum 90% of cases with mass and pain are 55% and 30% respectively.

Table- 2. Sex distribution.

Sex distribution	No. of cases (n=60)	%
Male	46	76
Female	14	24

Table 3: Presenting symptoms of study group.

Presenting symptoms	Number	%
Bleeding	54	90
Mass	33	55
Painful defecation	18	30
Constipation	14	23
Anal irritation	15	25

Table 4: Post procedure complication.

Complications	Open haemorrhoidectomy n=30 (%)	Closed haemorrhoidectomy n=30 (%)
Serous discharge	20 (66)	12 (40)
Pain	23 (76)	15 (50)
Minor bleeding	20 (66)	12 (40)
Urinary retention	03 (10)	02 (06)

Table 5: After 3 weeks follow up.

Complications	Open Haemorrhoidectomy n=30 (%)	Closed Haemorrhoidectomy n=30 (%)
Pain	18 (60)	10 (33)
Soiling	16 (53)	10 (33)

Table 6: Healing after 3 weeks follow up.

	Open Haemorrhoidectomy n=30 (%)	Closed Haemorrhoidectomy n=30 (%)
Healing	13 (43)	22 (73)

Table 7: After 6 weeks follow up.

Complications	Open Haemorrhoidectomy n=30 (%)	Closed Haemorrhoidectomy n=3 0(%)
Pain	10 (33)	03 (10)
Soiling	11 (36)	06 (20)

Post procedure complication

In the study group open haemorrhoidectomy had more complications in regard to pain (p< 0.05%), bleeding (p<0.05%) and serous discharge on 1st post-operative day.

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Post procedure complications

After 3 weeks follow up

After 3 weeks follow up pain (p<0.05) is significantly seen in open group

Healing after 3 weeks follow up

73% of cases in closed group were healed at 3 weeks, in comparison to 43% in open group.

After 6 weeks follow up

Pain (p<0.05%) and soiling was higher in open group compared to closed group. The findings were statistically significant, as suggested by the p value. A comparable number of patients were found to be healed both in open and closed haemorrhoidectomy at 6 weeks follow up.

After 3 months follow up

Both in open and closed group had completely healed wound with no anal strictur.

DISCUSSION

The age and sex distribution among both the procedures was compared with a study done by Arbman et al.[23] In this study, it was found that the age at presentation was more than a decade earlier than the age at presentation seen in the study. The male and female ratio in this study was also found to be much higher than in the study by Arbman et al.

Table 9: Age and sex distribution.

Procedure	Open Haemorrhoidectomy		Closed Haemorrhoidectomy	
	Present study	Arbman et al	Present study	Arbman et al
Mean age (in years)	35 (20-60)	48 (21-80)	38 (17-80)	49 (25-81)
Male/Female ratio	23/7	26/13	23/7	22/16

This is comparable to the results of You SY et al.[24] Pain and soiling following both the procedures was assessed after 3 weeks and compared with the study by Arbman et al. In this study, it was seen that a higher percentage of people complained of pain and soiling at 3 weeks following open haemorrhoidectomy than those undergoing closed Haemorrhoidectomy which was comparable to the results of the above-mentioned study.

Table 10: Post-procedure complication.

Complication	Open haemorrhoidectomy		Closed haemorrhoidectomy	
	Present study	You SY et al	Present study	You SY et al
Pain (in %)	76	45	50	15

Table 11. Follow-up at 3 weeks.

	Open haemorrhoidectomy		Closed haemorrhoidectomy	
	Present study	**Arbman et al.**	**Present study**	**Arbman et al.**
Pain (in %)	60	54	33	46
Soiling (in %)	53	78	33	27

Healing at 3 weeks was compared to studies by Arbman et al. and You et al.[23,24] Compared to both the studies, a higher rate of healing was seen following open haemorrhoidectomy in this study while, healing rates following closed haemorrhoidectomy was comparable to that seen in both the studies.

As with the other two studies, a higher rate of healing was seen in closed as compared to open haemorrhoidectomy. Pain and soiling following both the procedures was assessed after 6 weeks and compared with the study by Arbman et.al. In this study, it was seen that a higher percentage of people complained of pain and soiling at 6 weeks following open haemorrhoidectomy than those undergoing closed haemorrhoidectomy which was comparable to the results of the above-mentioned study. Healing at 6 weeks was compared with a study by Arroyo et al.[25]

In present study, the healing rates following both the procedures were almost comparable at 6 weeks, whereas, in Arroyo's study, healing was seen in only 40% of patients following open haemorrhoidectomy but 90% patients had healed wounds after closed haemorrhoidectomy.

Table 12: Healing after 3 weeks.

	Open Haemorrhoidectomy			Closed Haemorrhoidectomy		
	Present study	**Arbman et al**	**You SY et al**	**Present study**	**Arbman et al**	**You SYet al**
Healing (%)	43	18	18	73	86	75

Table 13: Follow up at 6 weeks.

	Open haemorrhoidectomy		Closed haemorrhoidectomy	
	Present study	**Arbman et al**	**Present study**	**Arbman et al**
Pain (in %)	33	24	10	19
Soiling (in %)	36	52	20	28

Table 14. Healing after 6 weeks.

Complication	Open Haemorrhoidectomy		Closed Haemorrhoidectomy	
	Present study	**Arroyo et al**	**Present study**	**Arroyo SY et al**
Healing (in %)	86	40	93	90

CONCLUSION

Hemorrhoids is one of the oldest diseases suffered by mankind causing significant discomfort, and the most common clinical presentation being bleeding and mass per rectum. Commonly done surgical procedure is open haemorrhoidectomy popularized by Milligan–Morgan. This study was done to compare the above procedure with closed haemorrhoidectomy popularized by Ferguson, with respect to post-operative pain, wound healing, post-operative course. The results of the study concluded that post-operative pain was less in closed haemorrhoidectomy with early wound healing.

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