Original Research Paper

Volume - 7 | Issue - 5 | May - 2017 | ISSN - 2249-555X | IF : 4.894 | IC Value : 79.96

General Surgery

A COMPARISON STUDY OF OPEN HAEMORRHOIDECTOMY vs STAPLER HAEMORRHOIDECTOMY (MIPH)

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ABSTRACT

Aims and Objectives: Many surgical and non-surgical treatment modalities are available for treatment of haemorrhoids.Out of which haemorrhoidectomy is regarded as the cure of disease. It can be performed in many ways. Conventional open method is widely accepted by many surgeons. MIPH is a recent advance in the management of haemorrhoids. This study is aimed to compare the two surgical modalities to treat haemorrhoids namely Open haemorrhoidectomy and MIPH (Stapled Haemorrhoidectomy) in technical, functional and economical aspects.

Methods: A prospective randomized study was conducted on 40 patients in ESIC Medical college & Hospital. All patients with 3rd and 4th degree haemorrhoids were hospitalized; all routine investigations were done and evaluated as required. All cases were thoroughly studied and followed up according to the subjective and objective criteria.

Results: In patients who underwent stapler haemorrhoidectomy, the duration of surgery was less, postoperative pain was less, postoperative bleeding was also less, the patients were ambulated in 12-24 hours, and hospital stay was 2-3 days and returned to their routine work postoperatively in 10 days.

Conclusion: Stapler haemorrhoidectomy is effective in terms of decreased per- and postoperative blood loss, minimal pain, less requirement of analgesics and less pain at first bowel movement, faster wound healing with faster postoperative recovery and short postoperative hospital stay with early return to normal routine activity but MIPH is expensive as compared to open technique. However, long-term follow-up is necessary to determine whether these initial results are lasting.

KEYWORDS :

Introduction:

Haemorrhoids is certainly one of the commonest ailments that afflict mankind. It is interchangeably known as Piles, but etymologically the words have different meanings. The term 'haemorrhoid' is derived from the Greek adjective haimorrhoides, meaning bleeding (haima=blood, rhoos=flowing)[1,2,3,4,5]. On the other hand the term 'pile' is derived from the Latin word pila, meaning a ball, which aptly can be used for all forms of haemorrhoids[6,7,8,9]. Morgagni attributed haemorrhoids to the upright posture of man as the causative factor. It is difficult to obtain any accurate data of their incidence and it is more difficult as many patients have asymptomatic haemorrhoids[10,11]. It is a frequent finding that patient having haemorrhoids never had any symptoms [12, 13]. The prevalence of haemorrhoids increases with age. It seems likely that at least 50% of people over the age of 50 have some degree of haemorrhoids[14]. Haemorrhoid sufferers are often afraid to seek treatment because they are afraid of the pain associated with haemorrhoidectomy. Troublesome symptoms of haemorrhoids like bleeding, prolapse, pain warrants treatment[15,16].

Objectives of the Study:

The aims and objectives of this study are to compare between circular-stapler haemorrhoidectomy (MIPH) and conventional haemorrhoidectomy in terms of:

- Time taken for the procedure
- Postoperative complications: postoperative pain, postoperative bleeding, urinary retention
- Post-operative recovery with hospital stay and return to normal activity
- Cost effectiveness

Inclusion Criteria:

40 patients underwent MIPH whereas 40 comparable cases of open haemorrhoidectomy were taken for the purpose of this study. All patients with 3rd & 4th degree haemorrhoids were hospitalized; all routine investigations were done and evaluated as required.

Results and Discussion:

A study has been undertaken to compare the results of two different surgical procedures for the treatment of 3rddegree & 4th degree haemorrhoids i.e. open haemorrhoidectomy and MIPH (Stapled Haemorrhoidectomy). 40 cases of each were taken for this study with careful follow up of these patients.

In the present study, more patients belong to 41-50 years group, with male predominance, with mean age of presentation 45.8 ± 13.8years. 70% are male patients and 30% are female patients.

Table 1 shows age and sex distribution, method of surgery group.

Age in yrs.	Males	Females	Total
<30	5	2	7
31-40	6	2	8
41-50	6	5	11
51-60	6	2	8
>60	5	1	6
Total	28	12	40
N=40			
MIPH	15	5	20
OPEN	14	6	20
TOTAL	29	11	40

Average duration for open haemorrhoidectomy was 45 minutes as compared to 38 minutes in MIPH. In case of MIPH, duration of initial cases was around 60 to 70 minutes which on experience reduced to 25 to 40 minutes. The T-value is 2.553608. The P-Value is 0.016393. The result is significant at $p < 0.05$. This clearly shows MIPH needs a longer learning period even to an experienced surgeon.

Post-operative pain scores	Miph	Miph%	Open method	Open method%
Mild (0-3)	13	65	4	20
Moderate (4-7)	5	25	10	50
Severe (8-10)	2	10	6	30

Post-Operative Bleeding				
Number of patients who had post-operative bleeding	2	10	5	25
Post-Operative Urinary Retention				
Number of patients who had post-operative urinary retention	2	10	3	15

Post-operative Pain:

Most of the patients in the MIPH group complained of mild pain (65%) which subsided on giving analgesics only as compared with only 20% of such patients in the open haemorrhoidectomy group. This was in contrast to the patients who underwent open haemorrhoidectomy in which 50% of the patients complained of moderate amount of pain for which they had to be given round the clock analgesics. Comparatively only 25% of the patients who underwent MIPH had a moderate amount of pain. 30% of the patients who underwent open haemorrhoidectomy complained of severe pain which was not relieved even by round the clock analgesics and were given opioid analgesic, sedatives. In comparison 10% of the patient who underwent MIPH complained of severe pain. The chi-square statistic is 14.0278. The P-Value is 0.000899. The result is significant at $p < 0.05$.

Post-operative Haemorrhage:

The chi-square statistic is 20.0635. The P-Value is 4.4E-05. The result is significant at $p < 0.05$. 25% of patients had mild to moderate bleeding in the conventional group and 10% of patients in the stapler-haemorrhoidectomy group.

Urinary retention:

There is no significant difference between the two groups in post-operative urinary retention with p value >0.05.

Hospital stay:

Days	Open Group (20cases)		MIPH (20 cases group)	
	No.	%	No.	%
1 – 3	5	25	20	100
4 – 6	12	60	0	0
>6	3	15	0	0

Hospital stay was much shorter for the MIPH group. All patients who underwent MIPH were discharged by 3rd post-operative day. In contrast only 25% patients of open haemorrhoidectomy were discharged on 3rd post-operative day. Mean post-operative hospital stay in open group was 6 days. MIPH is associated with short post-operative hospital stay due to less pain and less morbidity with fewer complications. The chi-square statistic is 20. The p-value is 4.5E-05. The result is significant at $p < 0.05$

Total Time to Resume Routine work:

Days	Open Group		MIPH Group	
	No	%	No	%
1- 10	0	0	18	90
11 –20	11	55	2	10
>20	9	45	0	0

Most of the patients who underwent MIPH returned to routine work within 10 days (90%). This was much earlier than the open haemorrhoidectomy group who required 2 to 4 weeks for resumption of routine work. Though MIPH is costly, early resumption of work helps economically. The chi-square statistic is 26.4444. The p-value is < 0.00001. The result is significant at $p < 0.05$.

Cost – effectiveness:

MIPH is expensive as compared to open technique. In open group there were many factors to increase expenses like longer post-operative hospital stay and late resumption of routine work (resulting in loss of working days), but MIPH is still more costlier. Disposable nature of MIPH instrument increases cost of therapy but future advances in MIPH can make it cheaper, re-usable and universally available.

Conclusion:

Conventional haemorrhoidectomy is still performed in many higher centers but in this era of minimal invasive surgery, stapler haemorrhoidopexy is fast replacing conventional haemor rhoidec tomy.

Following conclusions have been summarized from the study:

- To study the efficacy of MIPH in Indian population, a much larger group with matched controls is needed.
- Out of the two techniques, open haemorrhoidectomy is universally available, simple to learn, economical procedure with few complications and associated with longer wound care and long duration of morbidity.
- MIPH has less peri-operative and post-operative complications. Patients undergone MIPH had less blood loss with less post-operative pain and morbidity.
- MIPH is associated with shorter postoperative hospital stay and quicker return to routine work. MIPH has greater patient satisfaction and better functional outcome – quality of life.
- Though MIPH is costly, early resumption of work may help economically.
- MIPH has a longer learning period but duration of surgery can be shortened with experience.
- Disposable nature of MIPH instrument increases cost of therapy but future advances in MIPH can make it cheaper, re-usable and universally available.

Both surgical modalities are equally efficacious in curing internal haemorrhoids but open haemorrhoidectomy is preferred for internal haemorrhoids with anal fissure, anal fistula, skin tags and external haemorrhoids.

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