



## A Comparative Study of Management of 3<sup>rd</sup> Degree Haemorrhoids Miph (Minimal Invasive Procedure For Haemorrhoides – Stapled Haemorrhoidectomy) Vs Open Haemorrhoidectomy

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### ABSTRACT

**Background and Objectives:** Many surgical and non-surgical treatment modalities are available for management 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 recent advance in the management of haemorrhoids. This study is aimed to compare the two surgical modalities to treat the haemorrhoids namely Open haemorrhoidectomy and MIPH (Stapled Haemorrhoidectomy) in technical, functional and economical aspects.

**Methods:** A prospective randomized study was conducted of 30 patients in Smt. NHL Municipal Medical College-Smt SCL Hospital. All patients with 3<sup>rd</sup> 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 assessment.

**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, 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 :** Open haemorrhoidectomy, haemorrhoids, stapler haemorrhoidectomy (MIPH)

### Introduction:

Haemorrhoid 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 haemorrhoides, meaning bleeding (haima=blood, rhoos=flowing).<sup>[1,2,3,4,5]</sup> 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.<sup>[6,7,8,9]</sup> Morgagni attributed haemorrhoids to the upright posture of man as the causative factor. It is difficult to obtain any accurate data of their incident and it is more difficult as many patients have symptomless haemorrhoids.<sup>[10,11]</sup> It is a frequent finding that patient having haemorrhoids may never had any symptoms.<sup>[12,13]</sup> The incident of haemorrhoids increases with age. It seems likely that at least 50% of people over the age of 50 have some degree of haemorrhoids.<sup>[14]</sup> 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.<sup>[15,16]</sup>

### 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:

Due to the restraints of costs involved in the usage of the stapling device for stapler haemorrhoidectomy, the number of patients opting for this procedure at our general hospital were few as compared to those preferring open haemorrhoidectomy. 15 patients underwent MIPH whereas 15 comparable cases of open haemorrhoidectomy were taken for the purpose of this study. All patients with 3<sup>rd</sup> 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 3<sup>rd</sup> degree haemorrhoids i.e. Open haemorrhoidectomy and MIPH (Stapled Haemorrhoidectomy). 15 cases of each were taken for this study with careful follow up of these patients.

Patients included in the study were from age 27 to 64 years. Incidence of haemorrhoids increases with age with peak between 30 to 50 years of age. Around 70% (20 cases) patients belongs to this age group. 15% (5 cases) of patients were below 30 years and above 50 years. Young and middle age patients seek earlier treatment than elders. Presentation in elderly patients is also late.

There is a male preponderance in the groups with around 80% (25 cases) of patients being male and the rest 20% (5 cases) being females. This shows male have more chances of developing haemorrhoids.

### Duration of Surgery

Sr no	Open Group	MIPH Group
1	45	65
2	50	55
3	80	55
4	50	65

5	55	45
6	60	40
7	55	45
8	45	30
9	45	35
10	40	30
11	45	30
12	50	25
13	40	30
14	65	25
15	50	25

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 2.53608. 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 Complications**

Complication	Open Group (15cases)		MIPH Group (15cases)	
	No	%	No	%
Pain				
Mild	3	20.0	13	86.7
Moderate	7	46.7	2	13.3
Severe	5	33.3	0	0
Bleeding				
Mild	1	6.6	13	86.6
Moderate	7	46.6	2	13.3
Severe	7	46.6	0	0
Urinary Retention				
- Passed easily	10	66.7	15	100
- Requiring hot Water bag and analgesics	3	20.0	0	0
-Requiring Catheterization	2	13.3	0	0

**Post-operative Pain :**

Most of the patients in the MIPH group complained of mild pain (86.7%) 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 47% of the patients complained of moderate amount of pain for which they had to be given round the clock analgesics. Comparatively only 13% of the patients who underwent MIPH had a moderate amount of pain.

33% 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 none 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  $p < 0.05$ . 46% of patients had moderate to severe bleeding in the conventional group and 13% of patients in the stapler-haemorrhoidectomy group. Only 6% of patients had mild bleeding in the conventional group and 86% patients in the stapler-haemorrhoidectomy group.

**Urinary retention :**

33.3 % of the patients who underwent open haemorrhoidectomy developed inability to pass urine, of which 13.3% were catheterized. Rest had relief with analgesics and hot water fomentation. In comparison none of the patients who underwent MIPH developed any sort of discomfort in passing of urine. The chi-square statistic is 6. The P-Value is 0.049787. The result is significant at  $p < 0.05$

**Hospital stay:**

Days	Open Group (15 cases)		MIPH Group (15 cases)	
	No.	%	No.	%
1 – 3	3	20	15	100
4 – 6	10	66.7	0	0
>6	2	13.3	0	0

Hospital stay was much shorter for the MIPH group. All patients who underwent MIPH were discharged within 3<sup>rd</sup> post operative day. In contrast only 20% patients of open haemorrhoidectomy were discharged on 3<sup>rd</sup> post operative day. Mean post operative hospital stay in open group was 6 days. MIPH is associated with short postoperative 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	14	93.3
11 –20	8	53.3	1	6.7
>20	7	46.7	0	0

Most of the patients who underwent MIPH returned to routine work within 10 days (93.3%). 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 haemorrhoidectomy is fast replacing conventional haemorrhoidectomy.

**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 of internal haemorrhoids but Open haemorrhoidectomy is preferred for internal haemorrhoids with anal fissure, anal fistula, skin tags and external haemorrhoids.

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