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Original Research Paper

**General Surgery** 

## COMPARATIVE STUDY OF CONVENTIONAL HAEMORRHOIDECTOMY VS STAPLED HAEMORRHOIDECTOMY ON POSTOPERATIVE PAIN AND QUALITY OF LIFE. Dr. Vikrant Assistant Professor in the department of General Surgery, GMC, Chandrapur. Dhawande\* \*Corresponding Author Assistant Professor in the department of General Surgery, VIMS, Pawapuri, Dr. Manoj Shaw Nalanda, Bihar. Assistant Professor in the department of General Surgery, GMC, Dr. Sarita Durge Chandrapur.

ABSTRACT

Aim: To compare between conventional haemorrhoidectomy and Stapled Haemorrhoidectomy on Postoperative Pain and quality of life.

Materials And Methods: It was a prospective randomised study conducted in the department of general surgery from January 2016 to December 2018. A total of 50 patients divided in 2 groups of conventional haemorrhoidectomy (CH) and stapled haemorrhoidectomy (SH) equally.

Results: Post operative VAS scores calculated at 12 hours, 24 hours, 72 hours and at 7th day showed P value as statistically significant at all times. The hospital stay was found to be significantly less in SH group (3.24±0.72 days) as compared to CH group ( $6.56 \pm 1.19$  days). Return to normal activity was found to be significantly earlier in SH group ( $5.88 \pm 1.20$ ) as compared to CH group (15.16±1.90).

Conclusion: Stapled haemorrhoidectomy is faster, causes less post operative pain and ensures a shorter hospital stay and early return to normal activity as compared to Conventional haemorrhoidectomy.

# KEYWORDS : haemorrhoidectomy, conventional, stapled

### INTRODUCTION:

We know that Hemorrhoids are one of the most common diseases of the anorectal region [1]. The medical approach is followed for the treatment of the disease in phases 1 and 2, while surgical hemorrhoidectomy is used in phases 3 and 4 [2]. The two most common conventional hemorrhoidectomy (CH) techniques are "Open" Milligan Morgan (MM) and "closed" Ferguson method [3,4]. Hemorrhoidectomy being the most effective treatment, the presence of postoperative pain and complications is the main reason why patients do not want the operation [5].

The cause of pain is not clear. Tissue damage and inflammatory response which occurs during surgery cause pain, while rapid healing and minimizing tissue damage can reduce pain [5,6]. Studies have shown that third-degree burn injury in the wound area terminates pain sensation in the nerves[7].

Though many studies have been carried out to find ideal technique but these 2 techniques were seldom compared at the same time. In the present study, we have compared conventional vs stapled hemorrhoidectomy with respect to post-operative pain and quality of life of patients.

#### MATERIALS AND METHODS:

This prospective randomized controlled study was carried out in the department of general surgery of a tertiary teaching hospital from January 2016 to December 2018 on patients were phase 3 and phase 4 haemorrhoids with the following exclusion criteria:

Patients with

1. thrombosed, strangulated and infected haemorrhoids;

- 2. fissure and fistula;
- 3. associated inflammatory bowel disease;
- 4. polyps, tumor or solitary rectal ulcer;
- 5. haemorrhoids in pregnancy.

Each patient underwent thorough clinical history taking and physical examination as per proforma and 50 consecutive eligible patients after final diagnosis and operative fitness and ready to take part in the clinical study were randomly

assigned in to two groups, 25 in CH group and 25 in SH group. Informed consent in their own language was taken from all patients participating in the study.

#### Statistical Analysis

Study Population:

To test for the differences in the mean values between the 2 groups:

Unpaired T Test :- Age, Operation time, Duration of hospital stay, Duration of time required to return to normal activity

#### Mann-whitney U Test :- VAS score

Chi-square Test :- Gender of patient, Degree of haemorrhoids

Probability level of 0.05 was considered significant.

#### **OBSERVATIONS AND RESULTS:**

A total of 50 patients were studied out of which CH group consisted of 25 patients and SH group consisted of 25 patients. Mean age of the patients in CH group is 53.40±13.86 years while that in SH group is 51.92±11.49 years. Combined proportion of male patients and female patients in both groups were 33 (66%) and 17 (34%) respectively. Proportion of patients with Third Degree haemorrhoids in CH group and SH group were 14 (56%) and 15 (60%) respectively. Proportion of patients with Fourth Degree haemorrhoids in CH group = 11 (44%) while that in SH group was 10(40%).

Parameters	CH group	SH group	P value
	N (%)	N (%)	
Gender:			0.370
Male	15 (60%)	18 (72%)	
Female	10 (40%)	07 (28%)	
Degree of haemorrhoids:			>0.05
Third degree	14 (56%)	15 (60%)	
Fourth degree	11 (44%)	10 (40%)	

Tables: Distribution Of Demographic Characteristics In The

Post operative VAS scores were calculated at 12 hours, 24 hours, 72 hours and at 7 th day. Mann Whitney U test was applied. P value is statistically significant (P value <0.001,at all time points.)

# Table2: Table Showing Post Operative VAS Scores In The Two Groups:

Post Operative	CH group	SH group	P value
Pain VAS score	(Mean ± SD)	(Mean ± SD)	
12 hrs	5.92±0.90	2.52±0.71	0.001
24 hrs	$4.32 \pm 0.90$	$1.48 \pm 0.58$	0.001
72 hrs	3.96±1.01	$1.32 \pm 0.62$	0.001
7 days	2.96±0.97	$0.68 \pm 0.74$	0.001

The mean operative time for CH group and SH group was 48.80 minutes, with standard deviation 4.48 minutes and 33.80 minutes, with standard deviation of 2.98 minutes respectively. The hospital stay was found to be significantly less in SH group ( $3.24\pm0.72$  days) as compared to CH group ( $6.56\pm1.19$  days). Return to normal activity was found to be significantly earlier in SH group ( $5.88\pm1.20$ ) as compared to CH group ( $15.16\pm1.90$ ). In both the findings, Unpaired t test was applied and the differences were found to be statistically significant (P value < 0.001).

#### Table 3: Table Showing Operation Time, Hospital Stay And Return To Normal Activity In Both Groups:

Parameters	CH group	SH group	P value
	(Mean ± SD)	(Mean ± SD)	
Operation time (mins)	$48.80 \pm 4.48$	$33.80 \pm 2.98$	0.001
Hospital stay (days)	6.56±1.19	3.2±0.72	0.001
Return of normal activity	15.16±1.90	5.88±1.20	0.001

#### DISCUSSION:

Surgeons over time have experienced that conventional excisional haemorrhoid therapies have proven to be very painful in the post operative period, accompanied by prolonged hospital stay. In our hospital conventional haemorrhoidectomy and stapled haemorrhoidectomy, both were performed routinely on patients with haemorrhoids. The study was conducted on 50 patients diagnosed to have Third degree and Fourth degree haemorrhoids, who were ready to take part in our study.

In pre operative findings, data collection shows us the age distribution, sex distribution and about distribution of degree of haemorrhoids in two groups. Mean age of the patients in CH group is 53.40±13.86 years and in SH group is 51.92±11.49 years WIT difference not significant. Sex distribution indicates that 60% of patients in the CH group and 72% of patients in the SH group are male, while only 40% of patients in CH group and 28% of patients in the SH group are female. Difference is statistically insignificant. Patients in CH group with third degree haemorrhoids is 56% and fourth degree haemorrhoids is 44%, while in SH group it is found to be same. In study by Bikhchandani J et al, the mean age of patients was 46.02 years (SD 12.33) in the stapled group and 48.64 years (SD 14.57) in the open group. Third degree and fourth degree haemorrhoids were more common in men (i.e., 80.9% and 85.7% in the stapled and open group, respectively).(9)

Intra-operative data collection indicates that the mean operative time was significantly less in the SH group 33.80 mins (range 26-40 mins) as compared to 48.80 mins (range 42-55 mins) in the CH group. In study by Boccasanta Pet al, mean operative time was 50 + 5.3 minutes in open haemorrhoidectomy group and 25+3.1 minutes in stapled haemorrhoidectomy group.(11) In study by Bikhchandani Jet al, the mean operative time was shorter in the stapled group 24.28 minutes (4.25) versus 45.21 minutes (5.36) in the Milligan-Morgan group (P < .001).(9) In study by Palimento Det al,Operation time for stapled haemorrhoidectomy was shorter, median 25 [range 15 to 49] minutes versus 30 [range 20 to 44] minutes, (p = 0.041).(12) Tjandra JJet al, showed Stapled haemorrhoidopexy was associated with less operating time (weighted mean difference, -11.35 minutes; P = 0.006).(10)

Post-operative data collection included VAS scores for pain, Duration of hospital stay and return to normal activities. The VAS scores for pain were significantly lower in SH group as compared to CH group at all time points. In study by Bikhchandani Jet al, the pain scores were significantly lower in the stapled group even after 2 weeks of surgery. The patients in the stapled group required significantly less number of doses of non-opiod as well as opiod analgesics as compared with the open group.(9) Ortiz Het al, showed that the stapled operation was significantly less painful than conventional haemorrhoidectomy. There were no significant differences in the total number of complications; however, the rate of recurrent prolapse was higher (14). The stapled procedure does not involve any surgery on the sensate anal mucosa below the dentate line, so it is less painful. Mean pain scores in various other studies conclusively prove that the postoperative pain is less after stapled technique.(8)

The hospital stay is significantly less in SH group  $(3.24\pm0.72)$  days) as compared to CH group  $(6.56\pm1.19)$  days), also the duration of return to normal activity is significantly less in SH group  $(5.88\pm1.20)$  as compared to CH group  $(15.16\pm1.90)$  in our study. Ganio E et al, concluded in his study that Reduced postoperative pain, shorter hospital stay and a trend toward earlier return to work suggest short-term advantages for the stapled technique.(13,15)

#### CONCLUSIONS:

It can be concluded that Stapled haemorrhoidectomy is faster technique, causes less post operative pain and ensures a shorter hospital stay and early return to normal activity as compared to Conventional haemorrhoidectomy.

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