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Surgery

COMPARATIVE STUDY OF CLINICAL OUTCOMES FOLLOWING STAPLER HEMORRHOIDECTOMY IN PATIENT PRESENTING WITH GRADE 3RD /4TH HEMORRHOIDS VERSUS CONVENTIONAL HEMORRHOIDECTOMY

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ABSTRACT Hemorrhoids are one of the commonest afflictions of human beings in the world as well as india. Treatment of hemorrhoids dates back to antiquity for the two chief symptoms bleeding and prolapsed. Conventional hemorrhoidectomy is a commonly performed operation for hemorrhoids. Stapler hemorrhoidopexy have a promising procedure causing minimal pain, early discharge and quick return to work but not cost effective. Our study is designed to find out which mode is helpful and ideal for a particular patient with reference to severity of disease and safety to patient and hospital stay. A total of 40 patients, 20 patients in each study group, admitted to Adesh Hospital with Grade III and Grade IV hemorrhoids from July 2015 to May 2016 were enrolled as cases based on result of preliminary survey. Our study concluded that the mean operative time, dose of analgesics and the duration of hospital stay was lower in stapler hemorrhoidectomy as compared with Conventional hemorrhoidectomy.85% of patients were highly satisfied with stapler Hemorrhoidectomy compared to 70% with open Hemorrhoidectomy.

KEYWORDS :

INTRODUCTION

Hemorrhoids are one of the commonest afflictions of human beings. It is said that 40 percent of population have symptoms due to hemorrhoids at some times of their life, a price possibly man has had to pay following the evolution of his erect posture[1].Terrel, in his words expresses it as "Man is a victim of acapricious creator, there is no doubt that man was intended to walk on all limbs, and having perhaps frustrated his', creator's plan by walking on two has created several problems. Hemorrhoids are one of them. The assumption of an erect posture was a prodigious accomplishment and man pays for his arrogance by the pain and humility that go with hemorrhoids. Morgagni[2] (1749) attributed the upright posture of man as the causative factor of hemorrhoids.

Hemorrhoid is a common condition in India as well.The haemorrhoids are the dilated vascular cushion within the anal canal, do not differed anatomically in normal individual from those in symptomatic patients. Hemorrhoids classified in internal and external haemorrhoids and graded I to IV depending upon size and prolapse. Treatment of hemorrhoids dates back to antiquity for the two chief symptoms bleeding and prolapsed.

Choice of method depends on severity and type symptoms, on the degree of prolapsed and on the expertise of the operator and equipment available. Various treatment modality are available;

1. Conservative treatment
2. Sclerotherapy
3. Rubber band ligation
4. Manual dilation
5. Cryosurgery
6. Infrared coagulation
7. Conventional hemorrhoidectomy
8. Laser hemorrhoidectomy
9. Stapled hemorrhoidectomy

Conventional hemorrhoidectomy is a commonly performed operation for hemorrhoids. It has good result but is a very painful procedure resulting in increase hospital stay and having complications like immediate haemorrhage, urinary retention and late complication like incontinence, stenosis.

Stapler hemorrhoidopexy have a promising procedure causing minimal pain, early discharge and quick return to work but not cost effective. Our study is designed to find out which mode is helpful and ideal for a particular patient with reference to severity of disease and safety to patient and hospital stay. Effective management of disease would decrease hospital stay and other complication associated with stapler hemorrhoidectomy more over it reduces Intra operative blood loss as well as operating time.[3,4,5]

MATERIALS AND METHODS

Study setting

The study was conducted in deptt. Of general surgery Adesh Institute of Medical Science and Research bathinda from July 2015 to may 2016.A total of 40 patients, 20 patients in each study group, admitted to Adesh Hospital with Grade III and Grade IV hemorrhoids from July 2015 to May 2016 were enrolled as cases estimated desired number of cases based on result of preliminary survey. They were further divided in 2 study selection of study groups.

Study Group 1. (ControlGroup)

Those patients were treated with open closed haemorrhoidectomy

Study Group II (Study group)

These patients were treated by stapler Hemorrhoidectomy.

Inclusion criteria

All patient of

1. Grade III haemorrhoids
2. Grade IV haemorrhoids

Exclusion criteria

1. Any anal pathology, fistula,anal stenosis
2. Patient on anticoagulant drugs
3. Medically unfit patients

Results

Table-1: Shows the distribution of age for both control and study groups

The P value P=.627 which shows difference in age between study and control groups. In the control group minimum age of patient was 23 year and maximum was 78 year where in study group minimum age

was 22 year and maximum 75 year.

Age Groups	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
21 - 30 yrs	5	25.0%	7	35.0%	0.627
31 - 40 yrs	1	5.0%	2	10.0%	
41 - 50 yrs	4	20.0%	4	20.0%	
51 - 60 yrs	5	25.0%	1	5.0%	
61 - 70 yrs	2	10.0%	2	10.0%	
71 - 80 yrs	3	15.0%	4	20.0%	
Total	20	100%	20	100%	
Mean ± SD	49.30 ± 17.90		46.80 ± 19.26		0.673

Table-2:Shows the distribution of sex among study and control group as stastically insignificant

Sex	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
F	8	40.0%	10	50.0%	0.525
M	12	60.0%	10	50.0%	
Total	20	100%	13	100%	

There was 8 female and 12 male patients in control group and in study group 10 female and 10 male patients. The P value 0.525 which stastically in significant.

Table -3: show main chief complaint in both groups.

MCC	Control Group		Study Groupa		P Value
	Frequency	%	Frequency	%	
B	18	90.0%	15	75.0%	0.139
P	1	5.0%	5	25.0%	
Total	20	100%	13	100%	

In study group bleeding was chief complaint in 15 patients and 5 patients having complaint of pain. In control group 18 patient's chief complaint was bleeding and 2 patient complaint of prolapse P value for test was – P=0.139 which was stastically insignificant.

Table:4The control and study group were classified according to grade of hemorrhoids.

Grade	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
3	16	80.0%	13	65.0%	0.480
4	4	20.0%	7	35.0%	
Total	20	100%	13	100%	

The patients were categorized according to grade of hemorrhoids. In control group 16 patients were with grade 3 and 4 patient were with grade 4 hemorrhoids. In study group 13 patients with grade 3 and 7 patient with grade 4. There was no. significant difference between the number patients of various grades in the 2 groups.

Table-5: compares operative time in two groups.

	Control Group (n=20)		Study Group (n=20)		P Value
	Mean ± SD	Min - Max	Mean ± SD	Min - Max	
Duration	37.75 ± 6.73	26 - 50	25.50 ± 3.82	20 - 35	<0.001

The mean operative time in control group was 37.75 minutes whereas For study it was 25.50 minutes. P value p<0.001 which indicates the duration of surgery between study and control was significant.

Table-6: The 24 hour post operative pain (vas score).

VAS	Control Group		Study Group		P Value
	Mean ± SD	Min - Max	Mean ± SD	Min - Max	
1 hr	5.70 ± 1.26	3 - 8	5.15 ± 0.93	4 - 7	0.125
6 hr	2.70 ± 1.34	1 - 5	2.00 ± 0.79	1 - 4	0.054
12 hr	1.32 ± 0.67	0 - 3	1.12 ± 0.83	0 - 2	0.536
24 hr	0.50 ± 0.79	0 - 2	0.20 ± 0.45	0 - 1	0.428

The mean vas score at 1 hour for control was 5.70 and for study 5.15. with P value 0.125(in significant) at 6 hour mean vas score for control was 2.70 and for study 2.0 with P value 0.054(in significant) at 12 hour mean vas score for control 1.32 and for study 1.12 P value P=0.536 (P value insignificant).

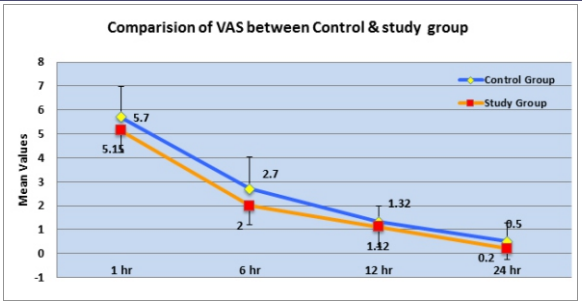


Table-7: duration of hospital stay in both groups

	Control Group		Study Group		P Value
	Mean ± SD	Min - Max	Mean ± SD	Min - Max	
Hosp Stay	21.35 ± 4.94	12 - 30	14.60 ± 4.31	10 - 28	<0.001

The mean hospital stay for control group was 21.35 and for study 14.60 hours. P value P<0.001 which was statically significant in both groups.

Table-8: shows requirement of analgesic (parenteral and oral) inthe two groups.

Analg._Par	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
1	7	35.0%	14	70.0%	0.058
2	8	40.0%	5	25.0%	
3	5	25.0%	1	5.0%	
Total	20	100%	13	100%	

Oral	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
0	3	15.0%	5	25.0%	0.029
1	11	55.0%	15	75.0%	
2	6	30.0%	0	0.0%	
Total	20	100%	13	100%	

Post operative analgesic was given (inj. Diclofenac) on demand when pain become severe a visual analogue scale (a ten cm horizontal line with gradations) was taken at every 4 hours after surgery close of inj. Diclofenac were given. When given when patient had visual analogue score of 4 or more but gap between two closes was kept minimum 6 hours.

At discharge, patients were advised to taken tab Diclofenac 50 mg SOS and total analgesic requirement was calculated at end of the one week for each patient.

The p value for requirement of parenteral analgesic post operatively was insignificant and for oral analgesic P=.029 which were statistically significant in both groups.

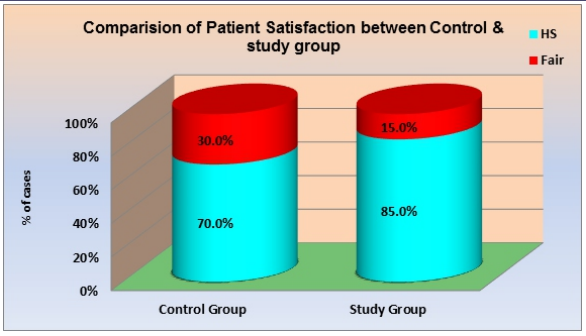
Table-9: shows rate of peri operative complication in two groups.

Complications	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
Increased Freq	2	5.0%	2	5.0%	1.000
Pain	2	10.0%	1	5.0%	1.000
Post Op Headache	0	0.0%	1	5.0%	1.000
Ur.Retn.	3	15.0%	0	0.0%	0.498

In control group 7 patients having post operative complication and in study group 4 patient having post operative P value was not significant for study and control group.

Table: 10 Level of patient's satisfaction.

Patient Satisfaction	Control Group		Study Group		P Value
	Frequency	%	Frequency	%	
Fair	6	30.0%	3	15.0%	0.451
HS	14	70.0%	17	85.0%	
Total	20	100%	13	100%	



DISCUSSION

Various studies had been done for comparing conventional and stapler Hemorrhoidectomy and most of the study shows that stapler Hemorrhoidectomy took less time as compared to open Hemorrhoi dectomy [6].

Third degree hemorrhoids are the commonest hemorrhoids requiring surgical treatment as reported in various studies [7,10,13,14]. In present study 29 patient out of 40 has grade III hemorrhoids .

Mean hospital stay in control group was 21.35 hours and in study group mean hospital stay was 14.60 hours.

All patients were explained the visual analogue score in the peri – operative period itself.VAS was monitored hourly after surgery till discharge. Mean value of Vas in control group at 1 hour was 5.70 ±1.26 and at 6 hour was 2.70 ± 1.34. In study group value of Vas at 1 hour 5.15 ±0.93 and at 6 hour it was 2.00 ± 0.79. At discharge all patient had pain which was easily manageable with oral analgesic. Various studies comparing postoperative pain in stapled versus open Hemorrhoid ectomy conclusively prove that postoperative pain is much lower after stapled Hemorrhoidectomy [7-14, 15, 16] But in our study P value at 1 hour and 6 hour (was P = 0.125 and 0. 054) was statistically insignificant.

The P value for requirement of parenteral analgesic was insignificant. 0.29 which were statistically significant in study and control group.

In control group 3 out of 20 patient having complaints of ordinary retention, in study group 0 patients out of 20.

The post operative bleeding was compared in two groups. No bleeding was noted in both groups.

In our study none of the patient developed anal stenosis or recurrence in follow up period.

Patients were evaluated for level of satisfaction. In control group 6 patient fairly satisfied and 14 patients highly satisfied. In study group, 3 patients fairly satisfied. In our study 85% patients were highly satisfied compared to open Hemorrhoidectomy (70%).

Mehiganetal [7] reported that 85% of patients were satisfied with stapled Hemorrhoidectomy whereas 75% with open Hemorrho idectomy.

This study shows that stapler Hemorrhoidectomy requires less operative time, oral analgesic and hospital stay.

Conclusion

1. Mean operative time was lower in stapler Hemorrhoidectomy.
2. Most of patient who needed Hemorrhoidectomy had grade III hemorrhoids.
3. Less Analgesic required in stapler Hemorrhoidectomy.
4. In evaluation of post operative pain VAS score was found to be not significant.
5. There was no hemorrhage /anal stenosis / recurrence reported in any case.
6. The mean duration of hospital stay was significantly lower in stapler hemorrhoideetomy.
7. 85% highly satisfied with stapler Hemorrhoidectomy compared to 70% with open Hemorrhoidectomy

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