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A CLINICAL STUDY ON THE OUTCOMES OF BANDING VERSUS SCLEROTHERAPY IN THE MANAGEMENT OF SECOND AND THIRD DEGREE HEMORRHOIDS

Surgery

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ABSTRACT

Hemorrhoids are considered one of the most frequent diseases of the anal region with high prevalence (1,2) involving any age and affecting both males and females equally. Various modalities and techniques have been developed to treat hemorrhoids ranging from simple dietary modifications and bowel habit regulation, through a number of non-operative procedures, to different techniques of haemorrhoidal excision. Our study aims to study the different modalities of treatment and their outcomes for this common condition with a sample size of 60 patients divided into 2 groups undergoing sclerotherapy and bandligation in each group. Our study concludes that banding and sclerotherapy are simple, safe, acceptable, effective and economical for treating symptomatic second and third degree hemorrhoids as an outpatient procedure. These procedures have low morbidity and few complications which can be managed conservatively. Our study showed statistical significance for bleeding and pain at day 3 only, else there was no difference on 1 month of followup.

KEYWORDS

Hemorrhoids, Sclerotherapy, Band Ligation

INTRODUCTION:

Hemorrhoids are considered one of the most frequent diseases of the anal region with high prevalence [1,2] involving any age and affecting both males and females equally.

Various modalities and techniques have been developed to treat hemorrhoids ranging from simple dietary modifications and bowel habit regulation, through a number of non-operative procedures, to different techniques of haemorrhoidal excision. First, second and third degree hemorrhoids can be treated by non-surgical techniques in outpatient department. Non-surgical methods which aim at tissue fixation (sclerotherapy, cryotherapy, photocoagulation laser), or fixation with tissue excision [rubber band ligation (RBL)].

MacRae and **McLeod**'s meta-analysis concluded that rubber band ligation is the initial treatment of choice for grade III internal hemorrhoids, but they also comment on the relatively low numbers of randomised trials evaluating haemorrhoidal treatment.[2]

So there is need to study the different modalities of treatment and their outcomes for this common condition. Hence our study titled "A CLINICAL STUDY ON THE OUTCOMES OF BANDING VERSUS SCLEROTHERAPY IN THE MANAGEMENT OF SECOND AND THIRD DEGREE HEMORRHOIDS."

AIMS:

To compare efficacy and the outcomes of banding versus sclerotherapy in the management of second and third degree hemorrhoids.

OBJECTIVES:

1. To assess and compare the efficacy of banding and sclerotherapy in hemorrhoids.
2. To determine the outcomes in terms of subjective relief of symptoms and complications related to recurrences

Study Place:

The study was conducted at Asansol district hospital, Asansol.

Study Population:

Patients of 18-65 years of age, having hemorrhoids attending General Surgery OPD in 2016 at government hospital.To avoid bias, each patient was randomized among 2 study groups (one sclerotherapy and other RBL group) by using computer generated random number

Study Design:

A prospective, single blind, randomised controlled study.

Sample Size:

Total 60 patients were included, 30 patients in each group.

Study Period: January 2016 to December 2016

Study Group:

Group A- 30 patients (sclerotherapy)
Group B- 30 patients (RBL)
The patient, was not aware of the type of procedure.

Inclusion Criteria:

1. Patients 18 to 65 years of age
2. Patients of either sex i.e. male and female
3. Patients having 2nd and 3rd degree hemorrhoids

Exclusion Criteria:

- Patients with 1st degree hemorrhoids and prolapsed hemorrhoids, acute fissure.

METHODOLOGY:

All patients presenting with 2nd and 3rd degree hemorrhoids were recruited in the study after taking written informed consent from each patient for using their clinical data for study purpose. After detailed history, clinical examination and routine laboratory investigations (complete blood count, liver function tests, renal function tests) patients were randomly selected equally in 2 groups for either banding or sclerotherapy.

RESULTS:

Table 1: Distribution of bleeding on 3rd day in two groups

GROUP			
BLEED 3rdD	Group-B	Group-S	TOTAL
no Row % Col %	26 65.0 86.7	14 35.0 46.7	40 100.0 66.7
score 1 Row % Col %	0 0.0 0.0	6 100.0 20.0	6 100.0 10.0
score 2 Row % Col %	3 27.3 10.0	8 72.7 26.7	11 100.0 18.3
score 3 Row % Col %	1 33.3 3.3	2 66.7 6.7	3 100.0 5.0
TOTAL Row % Col %	30 50.0 100.0	30 50.0 100.0	60 100.0 100.0

Chi-square value: 12.2061, p-value: 0.0067

Association of **bleeding 3rd day follow-up** in two groups was **statistically significant** (p=0.0067).

Table 2. Distribution of pain VAS on 3rd D in two groups

GROUP			
PAIN (VAS) 3rdD	Group-B	Group-S	TOTAL
0 Row % Col %	27 62.8 90.0	16 37.2 53.3	43 100.0 71.7
1 Row % Col %	1 50.0 3.3	1 50.0 3.3	2 100.0 3.3
2 Row % Col %	1 25.0 3.3	3 75.0 10.0	4 100.0 6.7
3 Row % Col %	1 16.7 3.3	5 83.3 16.7	6 100.0 10.0
4 Row % Col %	0 0.0 0.0	4 100.0 13.3	4 100.0 6.7
5 Row % Col %	0 0.0 0.0	1 100.0 3.3	1 100.0 1.7
TOTAL Row % Col %	30 50.0 100.0	30 50.0 100.0	60 100.0 100.0

Chi-square value: 11.4806, p-value: 0.0426
Association of **pain 3rd follow-up** in two groups was **statistically significant** (p=0.0426).

Table 3: Distribution of bleeding 30D in two groups

GROUP			
BLEED 3rdD	Group-B	Group-S	TOTAL
no Row % Col %	26 65.0 86.7	14 35.0 46.7	40 100.0 66.7
score 1 Row % Col %	0 0.0 0.0	6 100.0 20.0	6 100.0 10.0
score 2 Row % Col %	3 27.3 10.0	8 72.7 26.7	11 100.0 18.3
score 3 Row % Col %	1 33.3 3.3	2 66.7 6.7	3 100.0 5.0
TOTAL Row % Col %	30 50.0 100.0	30 50.0 100.0	60 100.0 100.0

Chi-square value: 1.0769, p-value: 0.5836
Association of **bleeding 30th Day follow-up** in two groups was not statistically significant (p=0.5836).

Table 4: Distribution of pain VAS 30D in two groups

GROUP			
PAIN (VAS) 30 D	Group-B	Group-S	TOTAL
0 Row % Col %	28 51.9 93.3	26 48.1 86.7	54 100.0 90.0
1 Row % Col %	2 66.7 6.7	1 33.3 3.3	3 100.0 5.0
2 Row % Col %	0 0.0 0.0	3 100.0 10.0	3 100.0 5.0
TOTAL Row % Col %	30 50.0 100.0	30 50.0 100.0	60 100.0 100.0

Chi-square value: 3.4074; p-value: 0.1820

Association of **pain 30th Day follow-up** in two groups was not statistically significant (p=0.1820).

DISCUSSION:

The need to treat hemorrhoids is based primarily on the severity of symptoms, but the type of treatment is based on the traditional classification of hemorrhoids, which may have little to do with symptom severity. The best treatment remains unanswered despite the wide variety of treatment options in use. Safety is of paramount importance, especially when treating a benign disease such as hemorrhoids.[4]

In a study conducted by **Kanellos et al**, comparison was made between simultaneous application of sclerotherapy and rubber band ligation, with sclerotherapy and rubber band ligation applied separately for the treatment of 2nd degree hemorrhoids,255 patients were involved. After a period of 4 years, all the patients were examined and their symptoms were recorded. They concluded that Sclerotherapy group developed significant complications after treatment compared to other two methods i.e. rubber band ligation and simultaneous application of rubber band ligation with sclerotherapy (p less than 0.001). Similarly our study also had significant complications on first follow up such as bleeding-53.34% (p=0.0067) and pain-46.67% (p=0.0426) in sclerotherapy group than banding group.[5]

In a study by **Savioz D et al** concluded that only 55%(n=92) of patients of 2nd degree hemorrhoids were completely symptom free after treatment by Rubber band ligation[6] where as in our study 23 patients (83.34%) were symptom free following Rubber band ligation. Here our results are not matching with their study but **Akram et al** conducted study comparing 3% sodium tetradecyl sulphate with phenol for injection sclerotherapy of 1st and 2nd degree hemorrhoids in 50 patients over 6 months concluded success rate of 70% in Sclerotherapy group[7].In our study, at the end of 1 month, 70% of patients were symptom free with sclerotherapy. Thus our study is consistent with other studies.

CONCLUSIONS:

1. The outcome of both Rubber band ligation and Injection sclerotherapy in this study were the same in treating grade 2 and grade 3 hemorrhoids except for the fact that the post procedure complications like bleeding and pain in initial few days were significantly more in patients who had injection sclerotherapy.
2. Both the methods, banding and sclerotherapy are simple, safe, acceptable, effective and economical for treating symptomatic second and third degree hemorrhoids as an outpatient procedure.
3. These procedures have low morbidity and few complications which can be managed conservatively.
4. Our study showed statistical significance for bleeding and pain at day 3 only, else there was no difference on 1 month of followup .

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