

A COMPARATIVE STUDY OF HAEMORRHOIDECTOMY AND RUBBER BAND LIGATION FOR THE TREATMENT OF SECOND AND THIRD GRADE HAEMORRHOIDS

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Abstract

Background: Haemorrhoids are typically emanated by straining during bowel movements, being overweight, or increased pressure brought on during the period of pregnancy in females. These frequently manifest by the middle of life. About half of people have at least one of the common symptoms, which includes rectal discomfort, itching, bleeding, and sometimes prolapse (haemorrhoids that protrude through the anal canal), by the age of 50. Haemorrhoids can be an annoying and uncomfortable intrusion, despite the fact that they are rarely hazardous. **Materials and Methods:** A hospital based comparative study involving 100 patients who underwent haemorrhoidectomy and 100 patient rubber band ligation for the treatment of grade II and III haemorrhoids. Comparable and matching study participants included in both the groups and outcome measures in terms of relief from symptoms and complication following the procedure were recorded and compared. **Result:** Both the procedures yielded desirable results with better improvement seen in individuals who had haemorrhoids removed via haemorrhoidectomy 91 (91%) vs those who had rubber band ligations 83 (83%) (p value 0.05). Lesser complications observed with rubber band ligation which outperformed haemorrhoidectomy in certain outcome parameters. **Conclusion:** Haemorrhoidectomy resulted in better relief from symptoms on the expense of more complications as compared to Rubber band ligation technique.

INTRODUCTION

It is uncertain whether surgical procedure is best for treating low-grade haemorrhoids. While rubber band ligation (RBL) is a frequently used outpatient treatment, haemorrhoidal artery ligation (HAL) has been advocated as an effective, safe procedure. Patients with grade II-III haemorrhoids underwent HAL vs RBL, and the recurrence rates were compared.^[1]

In rubber-band ligation, a rubber band is wrapped around a haemorrhoidal mass' base to cut off its blood supply. During 2–7 days, the haemorrhoid will then contract and peel off. The majority of haemorrhoid patients can benefit from outpatient therapy, and rubber-band ligation is one of the most popular outpatient options for these individuals.

It is simple to execute rubber-band ligation in an outpatient environment. Compared to surgical haemorrhoidectomy, the method is less painful and requires less time to recuperate.^[2]

The topic of haemorrhoid treatment has been the focus of several primary researches and meta-analyses. These research are all centered on

collections of similar surgical techniques. It is customary to distinguish between surgical methods for grade III and IV haemorrhoids and minimally invasive therapies for grade II and grade III illnesses (sclerotherapy and RBL) (haemorrhoidectomy and stapled haemorrhoidectomy). The criteria for deciding between a minimally invasive therapy and a surgery, nevertheless, are not always obvious. Several studies by treating surgeons have demonstrated that there is a considerable overlap in indications.^[3,4]

MATERIALS AND METHODS

Between the months of June 2021 and July 2022, a period of 1 year, the present research was carried out. It covered 200 patients who visited the OPD of general surgery at Dr SS Tantia Medical College, Hospital & Research Center in Sri Ganganagar, Rajasthan who had second or third-grade primary haemorrhoids. These 200 patients were then divided into groups of 100 each at random after being chosen for the treatment modality of haemorrhoidectomy or Rubber band ligation. Sigmoidoscopy was performed

on each patient to rule out lesions further up in the rectosigmoid. Exclusion criteria comprised of patients who had malignancy, fistulae and fissures. Patients from both the groups were followed up for improvement and prolapse. Statistical analysis was performed using SPSS (Statistical Package for Social Sciences) Statistical significance was defined as p value less than 0.05. Appropriate data representation tools were used.

RESULTS

[Table 1] compares the distribution of characteristics among the study participants. The mean age across the two groups did not differ significantly. (51.36 vs 52.68, $t=0.8351$, p value >0.05).

Male to female distribution was also even with no significant difference among the two groups. Similarly, it was also checked for similarities in

symptoms as assessed by the study participants which were also evenly distributed across the two groups. (p value >0.05)

Grade II haemorrhoids was in majority about two thirds in both the groups as elicited in [Figure 1]. (75% and 68 % respectively).

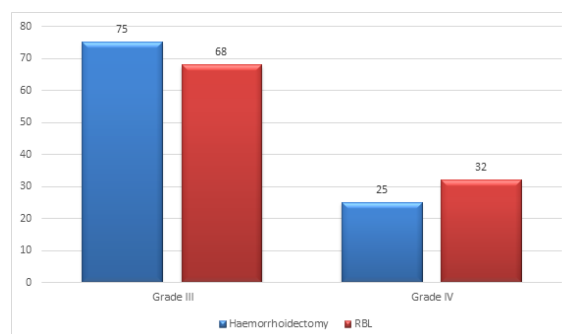


Figure 1: Classification of Haemorrhoids among study subjects

Table 1: Distribution of demographic characteristics of the study participants across different groups.

		Haemorrhoidectomy	Rubber Band Ligation	Test Value	p value
Number of patients		100	100	NA	NA
Mean age (years) \pm SD		51.36 \pm 12.25	52.68 \pm 9.99	0.8351	0.404
Gender	Male	56	51	0.5025	0.478
	Female	44	49		
Symptoms	Bleeding	81	79	0.3536	0.72634
	Pain	23	24	-0.1668	0.86502
	Pruritis	13	10	0.6649	0.50926
	Prolapse	72	75	-0.4807	0.63122
	Soiling	11	14	-0.6414	0.52218
Number of Haemorrhoids	Single	33	42	1.728	0.188667
	Multiple	67	58		

Table 2: shows the outcome parameters assessed and significance of difference between the two.

Outcome Parameters		Haemorrhoidectomy	Rubber Band Ligation	p value
Complete Improvement in symptoms		91	83	0.0449
Reduction of prolapse		71 (98.6 %) (n=72)	72 (95 %) (n=75)	0.1115
Complications	Pain	12	9	0.032
	Bleeding	4	8	0.0014
	Urinary Retention	3	0	0.001
	Fecal Impaction	2	2	NA
	Stricture	2	3	0.2215
	Incontinence	1	0	0.261
	Fissure/Fistula	2	3	0.112

Overall better improvement was seen among the patients who underwent haemorrhoidectomy 91 (91 %) vs rubber band ligation 83 (83 %) (p value <0.05). Patients with the complaints of prolapse showed improvement in majority 98.6 % of cases in haemorrhoidectomy whereas the improvement was in 95 % of the patients in the group of rubber band ligation. Patients experienced improved management with haemorrhoidectomy as compared to Rubber band ligation, but it was noted that complications were more among Haemorrhoidectomy group.

DISCUSSION

The degree of symptoms determines whether treating haemorrhoids is necessary, but the manner of therapy is determined by the conventional classification of

haemorrhoids that might be unrelated to how severe the symptoms are.^[5]

This uncertainty has been made worse by the large range of therapies. Despite the majority of the currently used procedures having undergone randomised examination, the question of the optimum treatment still remains unanswered. In an earlier meta-analyses, the results of symptom alleviation, retreatment, complications, and discomfort were the main focus.^[6]

Rubber band ligation causes a mucosal ulcer that heals by cicatrizing the mucosa to the underlying skin, which stops haemorrhoids from defecating throughout the healing process. The method may be performed on OPD basis in a few minutes without anaesthesia. In order to alleviate symptoms, haemorrhoidectomy attempts to remove the majority

of the haemorrhoidal plexus of veins. However, it must be done as an inpatient procedure needing anaesthesia and an additional 2 to 5 day hospital stay after the procedure.^[7]

In the present research, 71 (98.6%) of patients who underwent haemorrhoidectomy for grade II & III haemorrhoids had no prolapse, compared to 72 (95%) of patients who underwent Rubber Band Ligation while overall improvement in symptoms was better seen in the Haemorrhoidectomy group 91% as compared to the Rubber band ligation group 83 %. The results of Murie et al,^[8] Steinberg et al,^[9] and Panda et al,^[10] are very congruent with our results. Based on these data, RBL appears to be as effective as haemorrhoidectomy in prolapse with spontaneous decrease (grade II), according to Murie et al.^[8]

CONCLUSION

The current research study supports the effectiveness of haemorrhoidectomy over rubber band ligation. The discomfort, complications were however more in the said group. As rubber band ligation produces results that are comparable to those of surgery without the negative consequences, it makes sense to use it as the preferred method for haemorrhoids. Haemorrhoids of grade III or those that have returned after RBL should only undergo haemorrhoidectomy.

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