

A Cross Sectional Study on the Outcome of Rubber Band Ligation in third Degree Hemorrhoids

RIZWAN AHMAD KHAN¹, FAREEHA KHALIQ KHAN², MAAZ UL HASSAN³, MUHAMMAD NAVEED⁴

¹Associate Professor, Shalamar Medical and Dental College, Lahore

²Associate Professor, Fatima Memorial Hospital, Lahore

³Assistant Professor, Shalamar Medical and Dental College, Lahore

⁴Associate Professor, Al Aleem Medical College and Gulab Devi Hospital, Lahore

Correspondence to: Dr. Rizwan Ahmad Khan, Email: drizkhan@hotmail.com, Cell: 03224496132

ABSTRACT

Objective: To determine the outcome of rubber band ligation in third degree hemorrhoids.

Methods: - This design of this study was cross sectional study. The study was conducted at Shalamar medical and dental college, Lahore and the duration of this study was from April 2020 to September 2021. 215 patients were seen with complain of hemorrhoids, of which 47 had 3rd degree hemorrhoids. All patients with 3rd degree hemorrhoids underwent for rubber band ligation and were enrolled in the study. Outcome in our study was defined as pain, bleeding, constipation, anal fissure/fistula and infection. Chi-square test (χ^2) of all qualitative variables was applied by taking p-value < 0.05 as significant.

Results: - Of 47 patients admitted with 3rd degree hemorrhoid, 30 were males and 17 were females. The mean age of males was 38.78±12.71 while mean females age were found to be 22.73± 7.25 respectively. The most common complaint following rubber band ligation (RBL) was pain. 19 out of 47 patients were presented with pain followed by bleeding (14), constipation (13), anal fissure/fistula (10) and infection (8) which constitutes about 22.34 %, 22.78%, 15.32% and 14.03% respectively. There was significant relationship found between gender and anal fissure/fistula with p-value of <0.05.

Conclusion: - Patients with 3rd degree hemorrhoids after RBL procedure showed fewer complications comparable to other surgical procedures in the treatment of hemorrhoids. It is the best possible options in third degree internal hemorrhoids. Moreover, this procedure is simple and cost-effective and requires no hospitalization, no anesthesia and no post-operative care.

Keywords: - 3rd degree Hemorrhoids, Outcome, Rubber Band Ligation.

INTRODUCTION

This is a very common disease all over the world which has affected both the genders either male or females in all age groups. In the 1950s a new procedure had been introduced by Blaisdell for the ligation of bleeding internal hemorrhoids which can be performed anywhere without the requirement for hospitalization (1,2). The new idea depended on the way that the availability of inner hemorrhoids is exceptionally simple, for all intents and purposes without torment, and hence, reasonable for short term treatment (3,4). The Rubber band ligation (RBL) is the most useful and very famous technique. Most notably it proposes the treatment for the hemorrhoids without going to the hospital or anesthesia and with less problems as we compared to the other studies. (5,6). In the technique of the Rubber band ligation the hemorrhoids are knotted at the base with rubber band, through this procedure the supply of blood to the hemorrhoid is cut off. This is the only way for he treatment of internal hemorrhoids since that time (7).

For performing the rubber band ligation procedure, we can use the endoscope for forward view of we can do this without endoscope with a suction elastic band ligator or a forceps ligator. The preparation of bowl or sedation is not required and ligature should be performed in the area above the dentate line. Conduction without sensory nerves, whereby different patient positions can also be used (8).

According to the guidelines of the American society of colon and rectal surgeons, treatment for this has been categorized into three groups which has been discussed above. (a) Conservative treatment, which consists of in

increasing dietary fiber, avoiding straining at stools, and prolonged staying on toilet. Moreover, Sitz baths in ointments containing local anesthetic and steroids that provide short-term relief, (b) Minimally invasive procedures which include RBL, injection sclerotherapy, infrared coagulation, anal stretch, cryosurgery, laser hemorrhoidectomy, and Doppler-guided hemorrhoidal artery ligation, and lastly (c) Surgical therapy includes closed hemorrhoidectomy, open hemorrhoidectomy, stapled hemorrhoidectomy, and White head hemorrhoidectomy(9, 10).

PATIENTS AND METHODS

This study was conducted at Shalamar medical and dental college, Lahore and the duration of this study was from April 2020 to September 2021. A total of 215 patients were seen with complain of hemorrhoids, of which 47 had 3rd degree hemorrhoids. All patients with 3rd degree hemorrhoids underwent for rubber band ligation and were enrolled in the study. Outcome in our study was defined as complications occurred after the treatment by means of rubber band ligation. That includes pain, bleeding, constipation, anal fissure/fistula and infection. A Performa was used for the collection of data in which all details of the patients were recorded including physical examination and laboratory test. The sample technique that used was non-probability consecutive sampling SPSS version 22.0 were used for the analysis of the data and chi square tests were applied for all qualitative variables was applied by taking p-value < 0.05 as significant.

RESULTS

A total of 215 patients presented with complain hemorrhoids during the tenure, of which 47 patients had 3rd degree hemorrhoid, out of which 30 were males and 17 were females which constitute about 58.1 % and 35.7 % respectively (Table-1). The mean age of males was 38.78±12.71 while mean females age were found to be 22.73± 7.25 respectively (Table-1).

Table-1

Gender	n=47	percentage	Mean	Std
Male	30	58.1%	38.78	12.71
Female	17	35.7%	22.73	7.25

The most common complaint following rubber band ligation (RBL) was pain. 19 out of 47 patients were presented with pain followed by bleeding (14), constipation (13), anal fissure/fistula (10) and infection (8) which constitutes about 22.34 %, 22.78%15.32% and 14.03% respectively. Moreover, pain was also observed as the leading complication following RBL in both genders. About 11 males and 8 females were affected with pain. Though the least common complaint in male was infection and in female it was found anal fissure/fistula. 2 males were complained about infection while only 1 female was reported to have anal fissure/fistula post operatively.

Table -2 Symptoms after RBL Procedure

Symptoms	Gender		Total with percentages n=47	P-Value
	Male	Female		
Pain	11	06	19 (36.84%)	0.73
Bleeding	07	03	14 (22.34%)	0.57
Constipation	06	03	13 (22.78%)	0.77
Anal Fissure/fistula	07	01	10 (15.32%)	*0.02
Infection	02	02	08 (14.03%)	0.25

There was significant relationship found between gender and anal fissure/fistula with p-value of <0.05. Males are more likely to develop anal fissure/fistula postoperatively comparable to females in our study. Besides that, all other complains found to have insignificant relationship between them.

DISCUSSION

Pain is the leading complain following RBL procedure in our study compare to study conducted by Asma et al in which prolapsed is the major complain. This could be due to discrepancy of gender participation and age presentation in both the studies. Females over 50 are six times more likely to develop rectal prolapsed than men. Bleeding is the second most common complain found in our study. About 25% patients complained about bleeding. Similar results were found in study done by Mushtaq et al which showed bleeding is an important cause postoperatively(9). Constipation is also another major contributing factor in 3rd degree hemorrhoid after RBL procedure. Around 23 %

patients had constipation in our study. Contrary to this, study done by Asma et al only 3% patients had constipation. This could be due to less participation of female in study done by Asma et al, since females are more likely to be constipated compared to males due to anatomical differences and excessive concerns over hygiene. Moreover, anal fissure/fistula was found to have significant relationship in our study.9 males were found to have anal fistula/fissure postoperatively while meta-analysis of various studies by Andreia et al reported only 0.4% of patients with this complain. Infection is the least common complain documented in our study.

CONCLUSION

Patients with 3rd degree hemorrhoids after RBL procedure showed fewer complications comparable to other surgical procedures in the treatment of hemorrhoids. It is the best possible options in third degree internal hemorrhoids. Moreover, this procedure is simple and cost-effective and requires no hospitalization, no anesthesia and no post-operative care.

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