

RUBBER BAND LIGATION OF SYMPTOMATIC INTERNAL HAEMORRHOIDS; RESULT OF 450 CASES

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ABSTRACT

Objective To assess the outcome of rubber band ligation of 2nd and 3^d degree haemorrhoids in terms of relief of symptoms.

Study design Case series.

Place & Duration of study Colorectal clinic, Department of General Surgery, Jinnah Post Graduate Medical Center Karachi, from January 2001 to May 2008.

Patients and Methods All Patients with 2nd and 3rd degree haemorrhoids were included in this study. Data related to the age, gender etc, were recorded. Patients were counseled regarding prospects of success of the procedure. Short and long term outcome data were recorded for success of treatment.

Results A total of 450 patients underwent rubber band ligation. There were 337 males (74.88%) and 113 females (25.11%) with male to female ratio of 3:1. Age of the patients ranged from 20–80 years. Male with 2nd degree haemorrhoids were 297 (66%) and females were 203 (22.88%). Successful results were achieved in 86.22%.

Conclusions Rubber band ligation is a safe, effective and economical procedure for treating 2nd and 3rd degree haemorrhoids on out patient basis.

Key words Haemorrhoids, Rectal bleeding, Prolapse, Rubber band ligation, Outcome.

INTRODUCTION:

Haemorrhoids are defined as engorged (prolapse) anal cushions. Anal cushions are part of normal continent mechanism of anal sphincter and they differ from haemorrhoidal disease. There are four grades of haemorrhoids.¹ Haemorrhoidal disease is encountered in 5% of the general population and 50% of the individuals over the age of 50 years have complaints related to haemorrhoids.² Different modes of treatment have been

advocated through the years from such ambulatory measures as injection sclerotherapy, infra-red coagulation and rubber band ligation on the one hand, to various inpatient haemorrhoidectomy techniques on the other.³

Blaisdel first described rubber band ligation (RBL) of internal haemorrhoids in 1954. It subsequently was popularized by Barron in 1963 and is known amongst the most frequently practiced treatment for symptomatic internal haemorrhoids⁴. Most patients in initial stages are treated with conservative or minimally invasive approaches. Injection sclerotherapy and rubber band ligation (RBL) are two common interventional procedures to treat 1st degree and 2nd degree haemorrhoids respectively. These procedures can be performed in the outpatient clinic, with minimum resources and are cost effective.⁵

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Nowadays, rubber band ligation is the most widely used procedure, and it offers the possibility to resolve the haemorrhoidal disease without the need for hospitalization or anaesthesia with a lower incidence of complications when compared to conventional surgery.⁶ The aim of this study was to determine the usefulness of rubber band ligation in 2nd and 3rd degree haemorrhoids.

PATIENTS AND METHODS:

The records of all patients with 2nd and 3rd degree haemorrhoids coming to Colorectal clinic, Jinnah Postgraduate Medical Center Karachi were analyzed over a period of 7 years from January 2001 to May 2008. Exclusion criteria were 1st and 4th degree haemorrhoid cases not suitable for rubber band ligation. Clinical data was recorded in proforma including age, gender, presenting complaints such as bleeding, prolapse, discharge, itching and constipation. A detailed history was taken to exclude other causes of bleeding per rectum. Physical examination included digital rectal examination and proctoscopy in all patients. Colonoscopy and sigmoidoscopy advised in patients with suspicion of colonic disease and patients above 45 degree of age respectively.

The banding instrument consists of a double drum with a long handle into which the base of the haemorrhoid could be held by tissue forceps. A rubber band with 1.5mm internal diameter is loaded around the drum by conical device. Banding was done in left lateral position without anaesthesia. The rubber band was pushed off the drum while holding the hemorrhoid by forceps and neck of the haemorrhoid ligated. Patients were allowed to go home with antibiotics, analgesics and laxatives for 3 days along with modifications in dietary habits (high fiber and increase water intake). They were instructed to report back immediately in case of any recurrence in symptoms.

Follow up was done at 2, 4 and 6 weeks, 3 months, 6 months, 12 months and every 6 month for the next four years. The categories of clinical responses were Cured when patient became asymptomatic and Improved if significant improvement occurs but not complete resolution of symptoms. The failure occurred when symptoms persisted. Recurrence was defined when after abatement symptoms recurred. Data analysis was performed through SPSS-12.0. Relevant descriptive statistics like frequency and percentages were computed to present qualitative response variables like sex, degree of haemorrhoids and presenting complaints following RBL.

RESULTS:

A total of 450 patients were treated. There were 297 males and 103 females with 2nd degree haemorrhoid

(88.88%). Thirty six male patients and 8 females had 3rd degree haemorrhoids (9.77%). Both 2nd and 3rd degree haemorrhoids were found in 4 males and 2 females (1.33%). Male to female ratio was 3:1. Presenting complaints were, bleeding in 343 patients (76.22%), constipation in 160 patients (35.55%), prolapse in 155 patients (34.44%), discharge in 14 (3.11%) and itching in 03 (0.66%) patients. Most of the patients were having more than one symptom.

Out of 400 patients of 2nd degree haemorrhoids, 352 had very good outcome (88%), 20 improved (4.44%), procedure failed in 18 (4%) and recurrence occurred in 10 patients (2.22%). In 3rd degree haemorrhoid cases 36 had very good outcome (72%), 4 showed improvement (8%), failure occurred in 6 (12%) and recurrence in 4 (8%) patients.

DISCUSSION:

Haemorrhoid is the most common problem that the colorectal surgeon encounters. According to population based studies, more than 5 million Americans suffer from haemorrhoids. Haemorrhoids may present with bleeding, prolapse, pain, discharge and itching. Symptomatic 1st and 2nd degree haemorrhoids usually respond to conservative outpatient care. This may include stool softeners and rubber band ligation. These patients do not experience any change in their routine or life style, and usually get good results without any serious complication.⁷ Haemorrhoidal stage is useful for therapeutic assessment. The diagnosis of haemorrhoidal disease is made by anoscopy, which allows confirmation in all cases.⁶

In our study haemorrhoids were more commonly found in males (74.88%) than in females (25.11%). Male to female ratio was 3:1. According to other authors such male to female ratio was 1.6:1.⁴ In our study, we found 2nd degree haemorrhoids (88.88%) far more prevalent than 3rd degree hemorrhoids (9.77%). Moreover, 2nd and 3rd degree haemorrhoids together were found in (1.33%) patients, where as Bernal J C et al reported 2nd degree haemorrhoids in 51.93% and 3rd degree haemorrhoids in 29.83% respectively.⁶

According to Ali U et al, a large percentage (90%) of patients presented with bleeding per rectum while 80% of patients had prolapse.¹ Ten percent of patients had burning while 55% of patients complained of itching. Majority (85%) of patients had constipation. The haemorrhoid mass prolapsing out of anus was self reducible in 60% patients. In our study, major presenting complaints were bleeding (76.22%), constipation in (35.55%) and prolapse in (34.44%). Most of the patients were having more than one symptom at the time of presentation.

Rubber band ligation for internal haemorrhoids is a commonly used alternative to formal operative haemorrhoidectomy. Its goal is to remove haemorrhoidal tissue, resulting fibrosis and fixation of the remaining mucosa thus alleviates symptoms of bleeding and prolapse. Multiple rubber band ligation has been reported both safe and effective. The banding was done on an outpatient basis without anaesthesia and the patients were not admitted. The banding instrument and rubber band were also cheap. This procedure is of short duration and effectively treats haemorrhoids.^{7,8,9} In our study haemorrhoids were banded in single session with Barron's method. Watson stated in his study that application of multiple rather than single band may prove more effective in those patients for whom bleeding was the predominant symptom prior to RBL to improve their satisfaction.¹⁰ Barron's method is an affective therapy for grade 3 haemorrhoids, with a success rate of 74.07% in their study. Rubber band ligation is an easy and safe technique in treating symptomatic grade 2 and grade 3 haemorrhoids. Bands should be placed 2cm above the dentate line to prevent immediate perianal pain and discomfort.¹¹

In our series, the results were very good in 86.22% of our patients. Complication rate was 13.78%. All were minor. Pain and transient anal bleeding were the most frequent complaints. Komborozos VA et al reported 88% of very good results after the end of the treatment.¹² Two years after RBL, only 28 out of 420 patients with very good early results were symptomatic (6.7%). There was no difference in the early success rates of RBL in 2nd and 3rd degree haemorrhoid. Also the percentage of asymptomatic patients with 2nd and 3rd degree haemorrhoids remained equally high two years after the ligation (91.2% and 90.1% respectively). In other study reported by Zafar A, 10% showed improvement and in 8% patients the procedure failed.⁸ According to Perez Vicente overall morbidity was 6%.¹³ The most frequent complications were rectal tenesmus (11%), slight or mild anal pain (7.4%), dysuria (4.3%) and transient anal bleeding (3.7%). Benzoni E et al did not find any major complication in their series. Sometimes a temporary anal discomfort occurs that could be controlled by low dose of NSAIDs.¹⁴

In a study by Savioz D et al only 51 patients (55%) of 2nd degree haemorrhoids were completely symptom free after treatment by RBL.¹⁵ There were 21 patients who presented with symptoms requiring topical treatment or observation. In these cases RBL should not be considered as having failed, as it was performed only after topical treatment was unsuccessful. Subsequently RBL symptoms diminished and could be managed with a topical treatment. The regression of the disease was evident in 11 patients since symptoms recurring after

RBL did not decrease following topical treatment. Since the patients complaints were similar to those prior to RBL, their cases were considered as relapses. A recurrence according to current literature occurs in 9% to 22% of patients and require haemorrhoidectomy in 2% to 7% of patients according to Gupta success rate of the method ranged between 79% and 91.8%.¹⁶ Al-Ghaniem et al pointed out that symptomatic anterior haemorrhoids requiring treatment are best dealt with RBL which is more efficacious and probably safer.¹⁷

CONCLUSIONS:

Rubber band ligation for symptomatic haemorrhoids is both safe and effective method providing convenient and economical way of treating haemorrhoids. RBL can be performed on an outpatient basis. It can be used for all grades of haemorrhoids as long as they are reducible to perform the procedure. From our point of view, patients with 2nd degree and 3rd degree hemorrhoids not responding to medical treatment should undergo RBL as treatment of choice.

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