ORIGINAL ARTICLE

EVALUATION OF TRIPPLE RUBBER BAND LIGATION FOR HAEMORRHOIDS

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ABSTRACT

Background: Haemorrhoids is a common problem. Although excisional haemorrhoidectomy is time tested and valuable yet a major and painful procedure. We aimed to evaluate less extensive minor procedure of rubber band ligation for patients suffering from haemorrhoids.

Methodology: This descriptive study was conducted from January 2005 to June 2007 at Shifa Hospital Lakki Marwat and Home Welfare Hospital D.I.Khan. A total of 380 patients with haemorrhoids underwent the procedure as a day case. Patients were followed up for one year to note recurrence of the problem and satisfaction of patients.

Results: Patients of both genders with age range 15-80 years underwent rubber band ligation. Postoperatively 44(11.56%) patients got the complications like pain, bleeding, vasovagal symptoms and urinary retention. On one year follow-up 16(4.2%) patients got recurrence. Three hundred and thirty two (87.36%) patients were satisfied with the results.

Conclusion: Rubber band ligation is safe and effective treatment for first, second and third degree internal haemorrhoids. It can be easily performed as a day case with lesser complication rate and better patient acceptability.

KEY WORDS: Haemorrhoids, Haemorrhoidectomy, Rubber band ligation.

INTRODUCTION

There are three anal cushions in anal canal i.e. left lateral, right anterior and right posterior corresponding to 3, 7 and 11 o'clock position. These cushions are well-defined thickened mucosal folds, suspended in the anal canal by a connective tissue frame work derived from the internal anal sphincter and longitudinal muscle having venous plexus in it. Weakening and fragmentation of connective tissue supporting anal cushions leads to their descent followed by venous engorgement, eventually resulting in haemorrhoids.[1,2]

Haemorrhoids are considered one of the most common disease of the anal region with prevalence rate of 50-60%.[3,4] Haemorrhoids commonly occur in patients with chronic constipation, raised intra-abdominal pressure and pregnancy. They occur both in males and females.[5-7]

Haemorrhoids can be treated either conservatively with simple dietary adjustment and bowel habit regulation for first degree,[8] and various surgical procedures are available for advanced hemorrhoids. Although surgical haemorrhoidectomy is more definitive in the control of symptoms, it is accompanied with significant pain and is considered a major procedure for a relatively benign disorder.[9,10] In dealing with first, second and third degree haemorrhoids less extensive procedure like scelerotherapy, cryotherapy, photocoagulation, laser, staple and rubber band ligation (RBL) are gaining more and more popularity.[11-16]

RBL both single or tripple are considered most widely used procedures as a day case surgery without general anaesthesia with lower incidence of complications.[17-19]

In this study, we assessed the effectiveness, safety and patients' satisfaction after rubber band ligation for haemorrhoids.

MATERIAL AND METHODS

This was a descriptive study conducted from January 2005 to June 2007 at Shifa Hospital Lakki Marwat and Home Welfare Hospital D.I.Khan.

Patients with first and second degree haemorrhoids were 175, and third degree haemorrhoids were 205. Patients with previous anorectal surgery, associated anorectal pathology (fissure, fistula, etc), complicated haemorrhoids (infected, ulcerated or strangulated) and patients who required general anaesthesia due to any reason were excluded from the study.

Thorough history was taken from all the patients. It was followed by local examination in left lateral position involving inspection, per rectal digital examination and proctoscopy, on the basis of

which the degree of haemorrhoids was determined.

All patients received water soap enema prior to surgery to avoid bowel movements in the first 24 hours so that ligatures would not be expelled. The procedure was done in the lithotomy position. First dose of broad spectrum antibiotic was given just before the start of procedure. All the patients were pre-medicated for analgesia, sedation and vomiting control.

The procedure was performed through proctoscope, placed about 1-2 cm above the dentate line using lignocaine gel as lubricant. RBL was performed using Barron gun. (Fig. 1)

Fig. 1: Picture of Barron gun with rubber band cartridges.

In all the patients triple band ligation was performed to treat all the three haemorrhoids in one session.

Patients were kept in hospital day care centre for 2 to 3 hours to detect any early complication. All the patients were informed about the expected shedding of necrosed haemorrhoidal nodule. At discharge from hospital patients were given oral antibiotic, oral analgesic, xylocain 5% cream and mild laxative. Patients were instructed to use high fiber diet and sitz baths with povidone mixed water twice a day. Follow up was scheduled on 2 week, 1 month, 6 months and one year.

RESULTS

Out of 380 patients, 292 (76.84%) were males and 88 (23.16%) females with male to female ratio of 3.3:1. Age range was 15 to 80 years.

On proctoscopy 48 (12.63%) were staged with first degree haemorrhoids, 127 (33.42%) second degree and 205 (53.94%) third degree disease.

They were operated using triple RBL. Complications occurred in 44 (11.57%) patients. (Table 1)

Pain was the main complication following RBL. Mild discomfort was present in most of the patients on day first postoperative which was controlled with oral or injectable analgesic. Severe pain lasting for 4 days was present in 28 (7.36%) patients and needed injectable analgesia. In one patient who had faecal impaction, pain was severe and needed general anesthesia, anal stretch and manual evacuation of faeces.

Minor bleeding in the form of drops of blood on straining was common on first 2 days, but notable bleeding lasting for one week after surgery was present in 8 (2.10%). Post-banding vasovagal symptoms (dizziness or fainting) were reported in 5 (1.31%) patients on the first 2 days.

Table 1: Complications after rubber band ligation for haemorrhoids.

Complications	1st Degree (n=48)	2nd Degree (n=127)	3rd Degree (n=205)
Pain	6	9	13
Bleeding	1	3	4
Vasovagal symptoms	1	2	2
Urinary retention	0	1	2
Total	8 (2.1%)	15 (3.94%)	21 (5.5%)

Three (0.78%) patients got urinary retention and needed catheterization. Post RBL infection, anal fissure, perianal abscess or anal stenosis were not observed.

Following RBL there was great improvement in patients symptoms on second follow-up visit. Three hundred and thirty- two (87.36%) patients were satisfied with the results of RBL at one year follow-up in terms of symptom relief and quality of life.

Recurrence occurred in 16 (4.2%) patients. Out of which 6 patients received repeat RBL session, 2 opted for a conventional excisional haemorrhoidectomy and 8 patients were satisfied with conservative measures.

DISCUSSION

Although haemorrhoidectomy can be done by various methods, yet the best one remains unanswered.[20] RBL for the first, second and third degree haemorrhoids can be performed as a day case without giving general anaesthesia, with lower complication rate and better patient satisfaction. RBL success rates range from 79 to 91.8%.[21] Wrobleski et al[22] reported that there was 80% improvement in symptoms and 69% of the patients were symptom free at five years of follow-up. In RBL recurrence of the symptoms after long follow-up ranges from 15 to 40% and respond usually to repeated ligation, only 2% require excisional haemorrhoidectomy. In literature other complications associated with RBL are severe postoperative pain 6%, vasovagal symptoms 4%, hemorrhage 2%, urinary retention 1.5%, infection 0.05%[20-21] and fissure, perianal abscess, fistula and anal stenosis 0.4%.[23-25] Bat et al[26] showed that the complication rate after RBL is relatively low 4.2% and most of the complications are minor and self-limiting, only 2.5% of the patients required hospitalization. In our study 380 patients were operated by RBL, 87.31% of them were symptom free on first year follow-up with recurrence rate of 4.2%. Out of 48 symptomatic patients only six patients got repeat RBL sessions. Two patients were operated using conventional excisional haemorrhoidectomy and in the rest of the patients symptoms were controlled by conservative means.

Pain was the major complaint of the patient post RBL session on day first which decreased on second and third post operative day. It was controlled with oral /parenteral analgesic. Twenty-eight patients (7.36%) who had severe intolerable pain even after day 4 were treated conservatively with injectable analgesics. Only one patient with fecal impaction needed surgical intervention.

Minor bleeding in the form of small blood drops was present on first 2 days postoperatively. Bleeding for one week occurrence in 2.10% patients.

Vasovagal symptoms in the form of dizziness and fainting were reported in 1.31% patients. Three patients (0.78%) presented with urinary retention, all were above 55 years of age having bladder outlet obstruction symptoms even before RBL.

In our study, infection, postoperative anal fissure, fistula, perianal abscess or anal stenosis were not observed at all. Eighty-seven percent of patients were satisfied with the results in terms of symptom relief.

CONCLUSION

Rubber band ligation is a simple and effective method for treating first, second and third degree internal haemorrhoids as a day case without subjecting to general anaesthesia with lesser complication risk and better patient acceptability.

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