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ORIGINAL ARTICLE

Treatment of Symptomatic Hemorrhoids by Baron's Band Ligation

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ABSTRACT

Haemorrhoids are a clinical symptom of a change in the normal functional architecture of the inflamed and swollen veins known as the anal cushion. Numerous treatment opportunities are available for this communal issue, but Baron's Gum Ligation (RBL) is the utmost frequently used technique for second- and third-degree haemorrhoids because it treats hemorrhoidal disease without anaesthesia, hospitalization, minimal complications, and ooutpatient discharge is uneventful compared to conventional surgery.

Purpose: We conducted this study to evaluate the effectiveness of rubber band ligation in the treatment of second- and third-degree haemorrhoids.

Methodology: This prospective study was performed on 76 patients over a six-month period at the Department of General Surgery from January 2021 to June 2021 at Islam Medical College and Teaching Hospital Sialkot. Rubber rubber ligation was used in all patients. A maximum of two haemorrhoids in one session were banded, and third as needed in a check-up done two weeks later. At the end of the fourth week, post-banding assessments were made for the presence and absence of bleeding, pain, and haemorrhoidal prolapse.

Results: Of the 76 patients, 60 (78.9%) were male and 16 (21.1%) were female. The M:F ratio was 5.0: 1.0. 37.85 years was the mean age of patients (range 15 to 68). The duration of symptoms in approximately 48 patients (63.2%) was less than one year old, and in 18 (23.7%) patients ranged from 1 to 3 years and 10 (13.2%) patients had symptoms for more than 4 years. Complications occurred in 23 patients, bleeding in three patients, pain in 18 patients, 2 patients have prolapsed.

Conclusion: RBL is effective, safe and simple method of symptomatic treatment for 2nd and 3rd degree haemorrhoids in an outpatient setting.

INTRODUCTION

Haemorrhoids are a clinical manifestation of a change in the typical functional architecture called as the anal cushion. The symptomatic development of haemorrhoids is associated with a mixture of factors such as veins engorgement and connective tissue weakening that supports these anal cushions and the mucosa that covers them[1-2]. Various non-surgical treatments, such as sclerotherapy, rubber band ligation, infrared coagulation and cryotherapy are considered first line than conservative treatments. Rubber band ligation is the furthermost commonly used technique because it treats haemorrhoids without having to be hospitalized, less anaesthesia, less complications and no complications on discharge from the ward compared to conventional surgery in the clinic[3-4].

Currently, sclerotherapy is recommended as an option in the treatment of 1st and 2nd degree haemorrhoids. Improper injection can cause mucosal necrosis or ulcer and lead to complications related with sepsis such as retroperitoneal sepsis, prostate abscess and bacteraemia[5-6]. Cryotherapy has received diminutive provision for haemorrhoids treatment due to low outcomes from improper procedure or the feeling that the rate of complications is unacceptable[7-8]. Though, coagulation by infrared seems to have advantages over rubber band ligation in rapports of postoperative pain, but generally needs longer management to reduce symptoms, availability problems, higher cost and short-term effects. Although conventional hemorrhoidectomy is known as minor surgical trauma, it is associated with varying degrees of postoperative pain, and the patient heals the open wound after hemorrhoidectomy. Haemorrhoidal artery ligation (HAL) and staple hemorrhoidectomy versus open hemorrhoidectomy, have a faster recovery and low complication rate, but a higher concern is cost effectiveness and availability issues, so these transactions are not done as often as RBL[9-10]. Rubber ligation is known to be an effective and ideal treatment for second-degree haemorrhoids. Bernal JC reports that rubber ligation is safe and easy procedure for treatment of symptomatic second- and third-degree hemorrhoids with 70% to 80% success rate[11]. We conducted this analysis to evaluate the effectiveness of rubber band ligation in the treatment of second- and third-degree hemorrhoids.

METHODOLOGY

This prospective study was performed on 76 patients over a six-month period at the Department of General Surgery Unit-I from January 2021 to June 2021 at Islam Medical College and Teaching Hospital Sialkot. All patients above the age of twelve years irrespective of the age were selected for the study and patients with hemorrhoids having anal abscess, fistula, fissure, colitis, rectal or anal growth were omitted from the study. The benefits and risks of rubber band ligation were clarified and consent was taken for the method and examination was obtained. Rubber band ligation was used in all patients. A maximum of two rubber bands are placed in one session, a third will be placed if necessary and the decision will be made in the examination within two weeks. At the end of the fourth week, post-banding assessments were performed for bleeding, pain, and loss.

RESULTS

Of the 76 patients, 60 (78.9%) were male and 16 (21.1%) were female. The M:F ratio was 5.0: 1.0. 37.85 years was the mean age of patients (range 15 to 68). In most patients with second-degree hemorrhoids, the patient's distribution is shown in Figure 1. The duration of symptoms in approximately 48 patients (63.2%) was less than one year old, and in 18 (23.7%) patients ranged from 1 to 3 years and 10 (13.2%) patients had symptoms for more than 4 years.

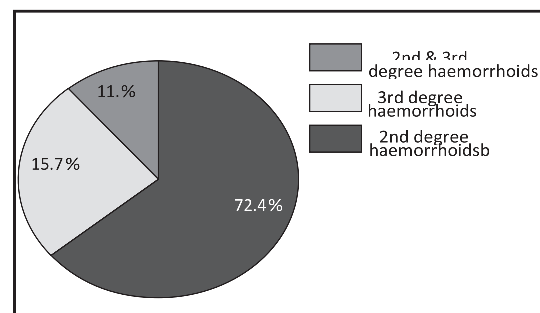

Figure 1:

Complications occurred in 23 patients, bleeding in three patients, pain in 18 patients, 2 patients have prolapsed. (Table 1) Comparing complications with gender, bleeding was detected in one male patient, prolapse developed in the same number of males and females, and a higher pain index was found in males than in females.

Table 1: Patient Demographic Features

Males	60	78.9%
Females	16	21.1%
Total	76	
Mean age	37.85 years	
Duration of symptoms		
< One year	48	63.2%
One to three years	18	23.7%
>Four years	10	13.1%

Table 2: Post-Operative Complications

Complications	Our Study	Bernal JC et al	Iyer VS et al	Walker AJ
Bleeding	(3.9%)	(13.81%)	(2.8%)	-
Pain	(23.7%)	(32%)	(51%)	-
Prolapse	(2.6%)	(13.8%)	-	(27%)

DISCUSSION

The Baron band ligation procedure is the furthermost effective and widely used methods for managing 2nd and 3rd degree hemorrhoids[12-13]. The McLeod and MacRae meta-analysis showed that rubber band ligation is the utmost effective outpatient treatment for hemorrhoids[14-15]. Though effective, it is related with a high proportion of recurrence of third-degree hemorrhoids in long-term follow-up. In this study, the M:F ratio was 5: 1 but according to the Iyer VS retrospective analysis, the male and female ratio was 1.6: 1. 14. Most of our patients had grade II hemorrhoids. (72.4 %). In Khan RA et al study; Nearly the same figure of patients had second- and third-degree hemorrhoids[16-17]. The total population of complications in our study was 28%. Pain was seen to be the utmost communal delinquent after surgery. The postoperative comparison of bleeding and pain observed in this study is presented in Table 2. Although postoperative pain was a communal issue in our patients, it was treated with oral painkillers and no admission was required in this research to relieve pain or bleeding or transfusion therapy after surgery[18-19].

The outcomes of this analysis were similar to other studies, and sometimes different, due to the small size of our sample and the shorter follow-up time, so larger-scale studies are needed to statistically prove this[20-21].

CONCLUSION

Baron's ligation is effective, safe, and simple technique of treating 2nd- and 3rd-degree hemorrhoids in an outpatient setting. Though, comprehensive studies with long-term follow-up protocols to effectively evaluate treatment success are recommended.

REFERENCES

1. Parveen K, Ahmed S, Mahboob A, Nazar MB. Comparison of injection sclerotherapy versus rubber band ligation for first and second degree haemorrhoids.
2. MEHTA AA, LAMTURE Y. Complication of Rubber Band Ligation in Second and Third Degree Haemorrhoids. Journal of Clinical & Diagnostic Research. 2020 May 1;14(5).
3. Dewanda NK, Babal R, Kumar H, Chawla D. Comparison of single versus double versus triple site band ligation for haemorrhoids in a single visit: a case-controlled double blind randomized study. International Surgery Journal. 2020 Apr 23;7(5):1445-51.
4. Saeed MT, Ali Z, Khan SA. Milligan–Morgan (open) haemorrhoidectomy vs rubber band ligation. Pak J Med Health Sci. 2017 Jan 1;11:396-400.
5. Orangio GR. Expert Commentary on the Evaluation and Management of Hemorrhoids. Diseases of the Colon & Rectum. 2020 Apr 1;63(4):424-6.
6. Selvaraj S. Effectiveness of internal sphincterotomy in reducing post operative pain after open hemorrhoidectomy: A comparative clinical study (Doctoral dissertation, Government Mohan Kumaramangalam Medical College, Salem).
7. Xie S, Ruan MF, Wang J, Li MB. Endoscopic band ligation for transverse colonic variceal bleeding: case report and review of the literature. Annals of Saudi Medicine. 2020 May;40(3):255-8.
8. da Silva Neves S. Sclerotherapy with polidocanol foam versus Rubber band ligation versus Hemorrhoidal Artery Ligation with Recto Anal Repair in the treatment of second and third-grade hemorrhoidal disease: a prospective study.
9. Jung JH, Jo JH, Kim SE, Bang CS, Seo SI, Park CH, Park SW. Minimal and Maximal Extent of Band Ligation for Acute Variceal Bleeding during the First Endoscopic Session. Gut and Liver. 2021 Aug 30.
10. Kaltenbach T, Asokkumar R, Kolb JM, Malvar C, Soetikno R. Use of the Endoscopic Clipping Over the Scope Technique to Treat Acute Severe Lower Gastrointestinal Bleeding in the Colon and Anal Transition Zone. Gastrointestinal endoscopy clinics of North America. 2020 Jan;30(1):13.
11. Jamshidi R. Anorectal complaints: Hemorrhoids, fissures, abscesses, fistulae. Clinics in colon and rectal surgery. 2018 Mar;31(02):117-20.
12. Abu Aeshah WY, Afifi SA, Mohammed AF, Sadek AM. Screening and Prevalence of Internal Hemorrhoids in Patients Undergoing Flexible Colonoscopy. The Egyptian Journal of Hospital Medicine. 2021 Oct 1;85(1):3474-7.
13. Morsy Afifi SA, Abu Aeshah WY, Elsayed Mohammed AF, Mohammad Sadek AM. Screening and Prevalence of Internal Hemorrhoids in Patients Undergoing Flexible Colonoscopy. Egyptian Journal of Hospital Medicine. 2021 Oct 2;85.
14. Pata F, Gallo G, Pellino G, Vigorita V, Podda M, Di Saverio S, D'Ambrosio G, Sammarco G. Evolution of Surgical Management of Hemorrhoidal Disease: An Historical Overview. Frontiers in Surgery. 2021:319.
15. Ibrahim JM, Sultan AI, Al-Atrakchi H. The Value of Colonoscopy in the Diagnosis of Bleeding Per Rectum in Adults. Indian Journal of Forensic Medicine & Toxicology. 2019 Oct 1;13(4):343.
16. Henry ZH, Caldwell SH. Management of bleeding ectopic varices. Techniques in Gastrointestinal Endoscopy. 2017 Apr 1;19(2):101-7.
17. Rrapi E, Narayan S, Siskin G, Stain SC, Tadros M, Tafen M. Bipolar and Monopolar Cautery, Clips, Bands, Spray, Injections, Embolization, and Minimally Invasive Surgery. InManagement of Occult GI Bleeding 2021 (pp. 165-195). Humana, Cham.
18. Scaldaferri F, Ingravalle F, Zinicola T, Holleran G, Gasbarrini A. Medical Therapy of Hemorrhoidal Disease 5. Hemorrhoids. 2018:49.
19. Deramo PJ, Truitt MS. Variceal Hemorrhage for the Acute Care Surgeon. InEmergency General Surgery 2019 (pp. 75-86). Springer, Cham.
20. Triantafyllou K, Gkolfakis P, Gralnek IM, Oakland K, Manes G, Radaelli F, Awadie H, Duboc MC, Christodoulou D, Fedorov E, Guy RJ. Diagnosis and management of acute lower gastrointestinal bleeding: European Society of Gastrointestinal Endoscopy (ESGE) Guideline. Endoscopy. 2021 Jun 1.
21. Fathalizadeh A. Diagnostic and Therapeutic Endoscopy: An Overview. Digestive Disease Interventions. 2018 Dec;2(04):299-313.