SAS Journal of Surgery ISSN 2454-5104
SAS J. Surg., Volume-2; Issue-1 (Jan-Feb, 2016); p-34-39
Available online at http://sassociety.com/sasjs/

Case Report

A comparative study of Barron's banding versus surgical excision ligation in the treatment of haemorrhoids

Dr. R.B. Dhaded[1], Dr. Srikanth Malra[2]
[1]Professor and HOD, [2]Post graduate student, Department of General Surgery, M.R. Medical College, Gulbarga, Karnataka, India

***Corresponding author**
Dr. R.B. Dhaded
Email: rbdhaded@gmail.com

Abstract: Traditional treatment methods for haemorrhoids fall into two broad groups – less invasive techniques including Barron's Banding (BB), which tend to produce minimal pain, and the more radical techniques like Surgical Excision Ligation (SEL), which are inherently more painful. For decades, innovations in the field of haemorrhoidal treatment have centered on modifying the traditional methods to achieve a minimally invasive, less painful procedure and yet with a more sustainable results. The availability of newer techniques has reopened debate on the roles of traditional treatment options of haemorrhoids. The main objective is to review the efficacy and safety of the two most popular conventional methods of haemorrhoidal treatment, Barron's Banding and Surgical Excision Ligation. The method is fifty patients with second and third degree haemorrhoids were randomly allocated to Barron's banding (25) or Surgical Excision Ligation (25). One, two or three piles were ligated in single session. Both the groups were compared post-operatively for their complications and duration of hospital stay. In results the Haemorrhoidectomy caused pain in all cases for more than 48 hours while Barron's Bannding caused pain in only 13.33% of cases. None of the patients in BB group presented with bleeding and urinary retention post-operatively while 33.33% of patients in SEL group presented with urinary retention post-operatively. In conclusion the Barron's Banding is safe and effective therapy for sympatomatic internal haemorrhoids. BB as an outpatient procedure is an effective treatment for second and third degree haemorrhoids and should be considered before recourse to surgery.
Keywords: Haemorrhoids; Barron's Banding; Surgical Excision Ligation

INTRODUCTION

Haemorrhoids are one of the most common ailments to afflict mankind, but it is impossible to give an accurate figure for their prevalence. Although many patients present with symptomatic disease, many do not and some never have symptoms, whether such individuals can be considered to have a disease must remain a moot point [1].

Haemorrhoids have plagued humans since they attained the erect posture. The word 'haemorrhoid' is derived from Greek word haemorrhoides, meaning flowing of blood (haem=blood, rhoos=flowing). The word 'piles' comes from Latin word pila meaning a pill or ball. To be accurate, we should call the disease as piles when the patient complains of a swelling and 'haemorrhoids' when he or she complains of bleeding [1].

There has been a long search for the best method of treatment for haemorrhoids. A well established approach to prophylaxis and treatment is to regulate the patient defecation and failing this, to use surgical methods. A wide variety of techniques, are currently available for the surgical treatment of haemorrhoids. Enthusiastic reports of success with injection sclerotherapy, rubber band ligation, photocoagulation and formal haemorrhoidectomy have been made. However, the increasing number of techniques suggested for dealing with haemorrhoids attests to the lack of universal satisfaction with those currently available. Under these circumstances, other factors like associated morbidity, long-term complications, hospital bed stay requirement and cost effectiveness should be taken into consideration in choosing a form of therapy.

AIMS AND OBJECTIVES OF RESEARCH

1. To study the clinical presentation of haemorrhoids.
2. To compare Barron's Banding and surgical excision ligation by following parameters:
3. Postoperative complications like pain, bleeding, and retention of urine.
4. Duration of hospital stay postoperatively.

MATERIALS AND METHODS

Source of Data

The present study was undertaken between September 2012 to August 2013 in the Department of Surgery, Mahadevappa Rampure Medical College, Gulbarga (Karnataka).

Method of Study

The study was prospective study .It was comparative study of Barron Banding versus Surgical Excision Ligation in the treatment of Hemmorhoid

In the present study, 50 cases of haemorrhoids were chosen with complaints of bleeding per rectum, pain during detection, mass per rectum, discharge and irritation. The patients were explained in detail about their disease and the modalities of the treatment viz Barrons Banding and surgical Excision Ligation. Willing patients were selected and examined and investigated as per proforma.

Assessment of the patient

The patients were thoroughly evaluated by taking the detailed history with personal history, family history, and diet history with systemic examination of respiratory, cardiovascular and per abdomen to rule out any cause predisposing to haemorrhoids. And then digital rectal examination was performed. They were then subjected to sigmoidoscopy to exclude inflammatory bowel pathology, Solitary rectal ulcer, mucosal polp or Carcinoma of the rectum. The patients were then submitted for routine blood investigations, urine examination, and stool for occult blood. Chest X-ray and ECG were taken as a part of pre operative work up.

Procedure

Either Barron's banding or Surgical Excision Ligation based on the patients wish.

Preparation

Soap water enema was given to evacuate the rectum on the night before and the morning of the planned day of procedure.

Position

Patient was put in left lateral (SIMS) position or lithotomy position while the procedure was performed. The patients were followed up closely in the wards for any complications. The patient who had pain postoperatively were relieved by using NSAIDS.

At discharge, the patients were asked for review at OPD after one week and after one month and evaluated for healing and complications. All the findings were entered in structural proforma.

1. Following parameters were used to compare Barron's Banding and Surgical Excision Ligation.
2. Postoperative complications like bleeding, pain and retention of urine.
3. Duration of hospital stay
4. Categorical data was analyzed by χ^2.

Inclusion Criteria

All patients attending the Department of Surgery, Mahadevappa Rampure Medical College with first second and third degree haemorrhoids during the period from September 2012 to August 2013. A time bound study.

Exclusion Criteria

- Fourth degree haemorrhoids and complicated haemorrhoids (Thrombosed, gangrene, infection, ulceration, strangulation)
- Pregnancy
- Paediatric age group and Haemorrhoids with carcinoma rectum.

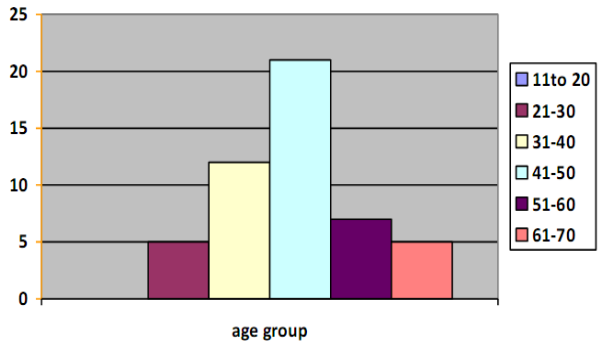
OBSERVATION AND RESULTS

During the present study between September 2012 to August 2013, a total of 50 patients were analyzed at the Department of Surgery, Mahadevappa Rampure Medical College, and Gulbarga with history and clinical examination suggestive of first second and third degree internal haemorrhoids. Out of the 50 patients, 25 patients were treated with Barron's Banding and remaining 25 with Surgical Excision Ligation.

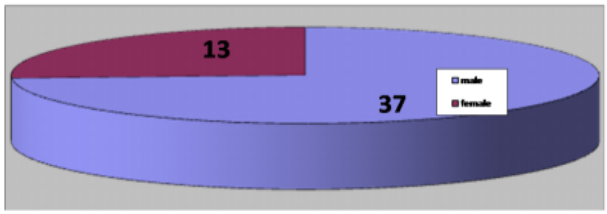
Table-1: Age wise distribution of patients

Age group (years)	Number	Percentage
11-20	--	--
21-30	5	10
31-40	12	24
41-50	21	42
51-60	7	14
61-70	5	10
Total	50	100

In the present study it was found that haemorrhoids were commonly seen at the age group of 41-50 years. The mean age being 44.8 years.



Graph 1: Age wise distribution of patients



Graph 2: Distribution of sex

Table-2: Gender wise of patients

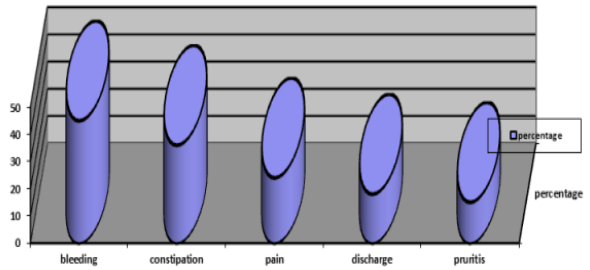
Sex	Number	Percentage
Male	37	74
Female	13	26
Total	30	100

In the present study incidence in males is 74 and in female it is 26%.

Table-3: Mode of Presentation

Mode of presentation	Number	Percentage
Bleeding	45	90
Constipation	36	72
Pain	24	48
Discharge	18	36
Pruritis	15	30

In the present study 28 (93.33%) patients presented with history of bleeding, 21 (70%) patients presented with history of constipation, 14 (46.67%) with history of pain, and 12 (40%) patients each presented with history discharge and pruritis.



Graph3: Mode of Presentation

Table-4: Different Procedures

Procedure	Number	First Degree	Second Degree	Third Degree
Barron's Banding	25	7	13	5
Surgical excision ligation	25	5	9	11
Total	50	12(24%)	22(44%)	16(32 %)

In the present study 25 (50%) patients were submitted for Barron's Banding and the other 25 (50%) patients for surgical excision ligation. In Barron's Banding group, 7 patients had first degree and 13 patients had second degree and 5 patients had third degree haemorrhoids. In surgical excision ligation group, 5 patients had first degree, 9 patients had second degree and 11 patients had third degree haemorrhoids.

Table-5: Number of Haemorrhoidal Masses

Haemorrhoidal mass	No. of patients
Three	31
Two	14
One	5

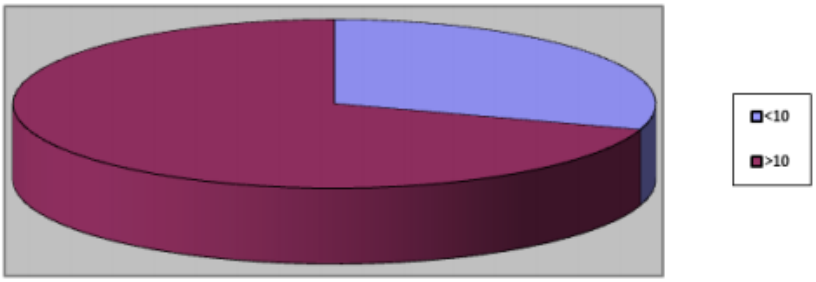
31 (62%) patients had three haemorrhoidal masses and all the three were treated in the single sitting irrespective of the procedure, 14 (28%) had two, and 5 (10%) had one haemorrhoidal mass.

Hemoglobin

The cases were allotted to groups as <10 gm%, signifying anaemia and >10 gm% as normal. The observation was as follows.

Table-6: Haemoglobin

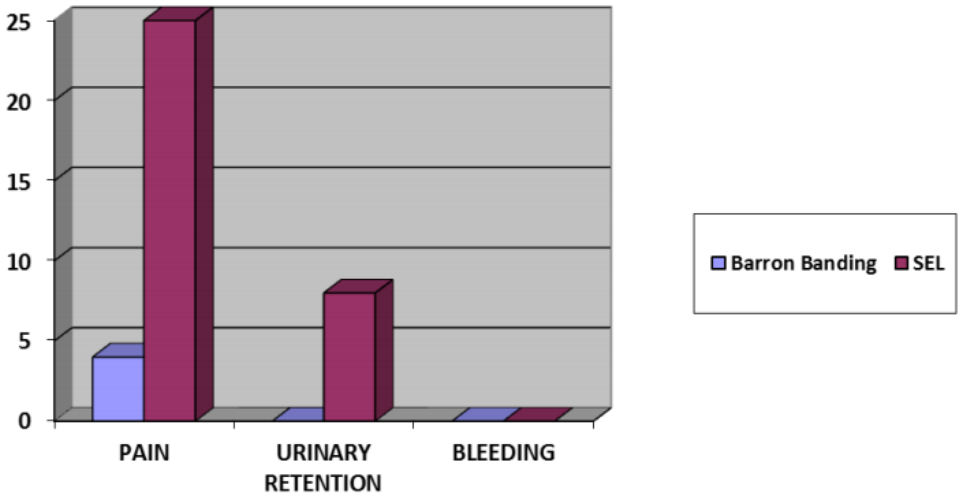
Haemoglobin	No. Of Cases	Percentage
<10	15	30
>10	35	70
Total	50	100



Graph-4 Haemoglobin

Table-7: Postoperative complications

Postoperative complications	Barron's Banding		Surgical excision ligation		χ^2	df	p.value
	No.	Percent	No.	Percent			
Pain	4	16%	25	100.00	36.201	1	<o.oo1
Urinary retention	--	--	8	32	9.524	1	<0.002
Bleeding	--	--	--	--			
Sepsis	--	--	--	--			
Vasovagal Reflex	--	--	--	--			



Graph5-Post Operative Complications

In Barron's banding 4 (16%) patients presented with pain for more than 48 hours, which required NSAIDs. In surgical excision ligation all patients had pain for than 48 hours. 8(32%) patients treated with surgical excision ligation had urinary retention probably due to more pain, but none of the patients treated with Barron's Banding had urinary retention. In the present study, post-operative complications were seen more than surgical excision ligation when compared to the patients treated with Barron's Banding.

Table-8: Duration of Hospital Stay

Procedure	Hospital Stay	
	Range	Mean
Barron's Banding	6 hours	6 hours
Surgical excision ligation	2-5 days	3days

The patients treated with Barron's Banding stayed in the hospital post-operatively for 6 hours, but the patients treated with surgical excision ligation stayed for 3days, because of more pain and other post-operative complications. During the same period total number of hospital admissions in Mahadevappa Rampure Medical College, Gulbarga was 20000 and total surgical admissions were 5840. Accordingly total number of haemorrhoids admissions was 114. So for total hospital admissions 0.57% of cases of haemorrhoids got admitted and for total surgical admissions, 1.95% of the cases of haemorrhoids got admitted and for total number of haemorrhoids, 21.93% of cases under Barron's banding and 21.93% cases underwent surgical excision ligation. Out of remaining 64 cases, 43 were falling in fourth degree of haemorrhoids, 19 cases were associated with fissure, fistula, perianal abscess, and 2 cases were associated with ca rectum so these cases were excluded from the study.

DISCUSSION

Haemorrhoids are one of the common disorders seen in day to day practice. Since olden days a number of procedures have been described to treat the haemorrhoids.

Age incidence

In the present study, the mean age at presentation was 41.7 years. In the study conducted by Ayman M, the mean age at presentation was 39.13±14.75 years.

Table-9: Age incidence in different studies

Author	Mean age (years)
N.Kumar[2]	56.0
M.C.Mishra[3]	33.3
R.Shalaby[4]	44.0
H.Ortiz[5]	46.6
E.Ganio[6]	48.0
Ayman M[7]	39.13±14.75
Present study	45.1

Sex Incidence

Hemorrhoids affect both the sexes, but are more common in males. In the present study, 73.3% of patients were males and 26.67% were females.

Table-10: sex incidence in different studies

Study	Male (%)	Female (%)
N.Kumar[2]	51	49
R.Shalaby[4]	60	40
Anthony R[8]	62	38
Ayman M[7]	82.8	17.2
Present study	74	26

In the present study, the incidence in males was slightly higher as compared to other studies, as the females in this place are reluctant to take medical advice. However, the results are comparable to the study conducted by Ayman M *et al*[7].

Modes of Presentation

In the present study, majority of the patients presented with bleeding (90%) as the main complaint, followed by constipation (72%), pain (48%), discharge (36%) and pruritis (30%).

Table-11: Mode of presentation in different studies

Mode of presentation	R.Shalaby[4]	H.Ortiz[5]	Ayman M[7]	Present study
Bleeding	69	86	81.6	90
Constipation	60	--	35.6	72
Pain	--	46	4.00	48
Discharge	39	--	--	36
Prutitis	34	58	8.53	30

In the present study, the modes of presentation were almost comparable to other studies.

Postoperative Complications

In the present study, Barron's Banding was compared with surgical excision ligation, by using post-operative complications like pain, bleeding and retention of urine.

In the present study all the patients treated by surgical excision ligation complained of pain, and 32% urinary retention. None of the patients had major bleeding. But in Barron's banding pain was present in only 16% of patients and none of them had bleeding and urinary retention.

In the study conducted by Murie J.A[10]., haemorrhoidectomy caused pain in all patients and postoperative haemorrhage in 13.4% of patients and rubber band ligation caused pain in 7% of patients and none of the patients presented with bleeding.

Table-12: Postoperative complication rate in different studies

POC	Cheng FC[9]		Murie JA[10]		Present study	
	SEL	BB	SEL	BB	SEL	BB
Pain	100	30	100	7	100	16
Bleeding	--	--	13.4	--	--	--

$\chi^2 = 36.207$, df =1, p value<0.001, Highly significant

In the study conducted by Cheng FC, haemorrhoidectomy caused pain in all patients and the patients treated with Barron's banding, 30% of patients had pain. In the present study, Barron's Banding has got less post-operative complications when compared to surgical excision ligation and the results were comparable with other studies for the treatment of first second and third degree haemorrhoids.

Postoperative Hospital Stay

In the present study, the mean postoperative hospital stay for Barron's banding was 6 hours and for SEL was 3 days.

Table-13: Postoperative hospital stay

Hospital stay	Mean±SD
Surgical group	3±0.88603
Banding Group	6±0 Hrs

In a study conducted by R.Shala by the postoperative hospital stay for haemorrhoidectomy was 2.2 days.

In the study conducted by Murie, the patients were treated as outpatients for haemorrhoidectomy and none of the patients were kept for more than one day.

In the present study, post-operative hospital stay was minimal for Barron's banding when compared to Surgical Excision Ligation and the results were comparable with other studies.

SUMMARY AND CONCLUSION

In the present study of 50 patients with second and third degree of haemorrhoids, 25 were treated with surgical excision ligation and remaining 25 with Barron's banding. Haemorrhoids are commonly seen in the middle age group and it affects both sexes and is more common in males. In the present study, the mean age of presentation was 45.1years and male to female ratio is 2.84:1.

Majority of the patients presented with bleeding as their main complaint. Other mode of presentation includes pain, constipation, discharge and pruritis. The patients treated with Barron's Banding had less postoperative complications with minimal pain unlike surgical excision ligation patients who had severe pain, and retention of urine.

The postoperative hospital stay was only 6 hours in Barron's Banding group and all cases were treated on outpatient basis whereas mean postoperative hospital stay was 3 days in surgical excision ligation group and this long duration of stay postoperatively is attributed to severe pain and urinary retention and the results are comparable to other studies.

Hence, Barron's Banding is safest and has got better efficacy in treating second and third degree haemorrhoides with lesser postoperative complications when compared to surgical excision ligation, which is associated with more postoperative morbidity. However, long term results could not be assessed in our study period.

REFERENCES

1. Keighley, Williams; Surgery of anus, rectum and colon. 2nd edition, Vol. 1; Saunders Publications, 351-422.
2. Kumar N, Paulvannan S, Billings PJ; Rubber band ligation of haemorrhoids in the outpatient clinic. Ann R Coll Surg Engl, 2002; 84(3):172.
3. Mishra MC, Prasad R; Randomized clinical trial of micronized flavonoids in the early control of bleeding from acute internal haemorrhoids. Br J Surg, 2000; 87: 868-872.
4. Shalaby R, Desoky A; Randomized clinical trial of stapled versus Milligan-Morgan haemorrhoidectomy. Br J Surg, 2001; 88: 1049-1053.
5. Ortiz, H, Marzo J, Armendariz P; Randomized clinical trial of stapled haemorrhoidopexy Vs conventional diathermy haemorrhoidectomy. Br J Surg, 2002; 89(11): 1376-1381.
6. Ganio E; Prospective randomized multicentric trial comparing stapled with open haemorrhoidectomy. Br J Surg, 2001; 88: 669-674.
7. El Nakeeb AM, Fikry AA, Omar WH, Fouda EM, El Metwally TA, Ghazy HE *et al.;* Rubber band ligation for 750 cases of symptomatic haemorrhoids out of 2200 cases. World J GE, 2008; 14(42): 6525-6530.
8. Groves AR, Evans JC, Williams JA; Management of internal haemorrhoids by rubber band ligation. Br J Surg, 1971; 58(12): 923-924.
9. Cheng FC; The treatment of second degree haemorrhoids by injection, rubber band ligation, maximal anal dilatation, and haemorrhoidectomy: a prospective clinical trial. Br J Surg, 1980; 67 (11): 786-8.
10. Murie JA, MacKenzie I, Sim AJ; Comparison of rubber band ligation and haemorrhoidectomy for 2nd and 3rd degree haemorrhoids – A prospective clinical trial. Br J Surg, 1980; 67(11), 786-788.