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Research Article

Band ligation in grade-I and grade-II internal haemorrhoids: a prospective observational study

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ABSTRACT

Background: Haemorrhoids are one of the most common benign anorectal problems worldwide with high prevalence. There are various modalities of treatment for grade I and II hemorrhoids like: medical management, instrumental techniques viz rubber band ligation, sclerotherapy, infrared photocoagulation, cryotherapy, doppler guided haemorrhoid artery ligation, laser therapy etc. Rubber band ligation resolves haemorrhoids without need of hospitalization /anesthesia and with lower incidence of complication and is too economic. Hence study was conducted to evaluate efficacy of rubber band ligation in grade I and II internal haemorrhoids.
Methods: The present study was conducted with 60 patients of grade-I and grade-II. Band ligation was done on outpatient basis in minor operation theatre with no anesthesia, multiple banding was done in single session. Post procedure follow up was done on 10th day, 1st month and 6th month for symptomatic improvement.
Results: In our study maximum no of patients were in a age group of 36 to 45 years. Of them 45 (75%) were males and 15 (25%) were females.80% of the cases assessed treatment as excellent and 20% with some residual symptoms assessed the treatment as of moderate help.
Conclusions: Rubber band ligation for internal hemorrhoids is an effective modality of treatment in 10 and 2° hemorrhoid which is convenient, simple, cost efficient has high patient acceptance with limitations as post procedure discomfort and pain.

Keywords: Rubber band ligation, Bleeding, Prolapse, Irritation, Discharge

INTRODUCTION

The word 'Haemorrhoid' is derived from Greek word Haemorrhoids, meaning flowing of blood (haem=blood, rhoos=flowing). The word 'piles' comes from Latin word pila meaning a pill or ball.[1] Haemorrhoids are one of the most common benign anorectal problems worldwide with high prevalence, estimated worldwide prevalence ranges from 2.9% to 27.9%, of which more than 4% are symptomatic (nearly 50% of proctological visits in a colorectal unit).[2]

There are various modalities of treatment for grade I and II hemorrhoids like: medical management, instrumental techniques viz rubber band ligation, sclerotherapy, infrared photocoagulation, cryotherapy, doppler guided haemorrhoid artery ligation, laser therapy etc.[3] Rubber band ligation resolves haemorrhoids without need of hospitalization /anesthesia and with lower incidence of complication and is too economic . Hence study was conducted to evaluate efficacy of rubber band ligation in grade I and II internal haemorrhoids.[4]

METHODS

The present study was conducted in the Department of general surgery at our district general hospital , in 60 patients of grade I and II internal hemorrhoids. Patients with bleeding per rectum were screened and examination was done including per rectal and proctoscopic examination. Patients having associated diseases were excluded and who gave consent for enrollments into study were included in study. Band ligation was done on outpatient basis in minor operation theatre with no anesthesia, multiple banding was done in single session. Post procedure follow up was done on 10th day, 1st month and 6th month for symptomatic improvement.

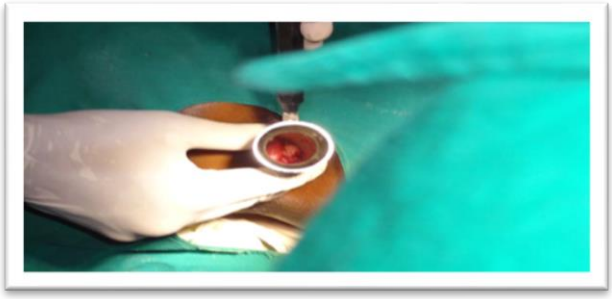

Figure 1: Proctoscopic view of second degree of haemorrhoid.

Figure 2: Haemorrhoids after rubber band ligation.

RESULTS

In our study maximum no of patients were in a age group of 36 to 45 years.

Table 1: Age distribution

Age Group (years)	Total	
	No. of cases	%
≤ 25	05	8.33
26-35	20	33.33
36-45	27	45
46-55	08	13.33
Total	**60**	**100**
Mean	**36.91**	

In the present study, 45 (75%) were males and 15 (25%) were females.

Table 2: Sex distribution.

Sex	Number of cases	Percentage
Male	45	75
Female	15	25
Total	**60**	**100**

About 60% of patients who underwent rubber band ligation were manual labourers whereas 40% were sedentary workers.

Table 3: Occupation.

Occupation	Number of cases	Percentage
Manual labourer	36	60
Sedentary worker	24	40
Total	**60**	**100**

In the present study 40% of patients had significant family history of either father or mother affected by hemorrhoids.

Table 4: Heredity.

Heredity	Number of cases	Percentage
Either father or mother affected with hemorrhoids	24	40
Parents not affected	36	60
Total	**60**	**100**

Most of the patients i.e., about 75% of the subjects were on mixed diet consuming low fiber mostly non-vegetarian diet.

Table 5: Dietary habits of the study group.

Diet	Number of cases	Percentage
Vegetarian	15	25
Mixed	45	75
Total	**60**	**100**

It was observed that maximum number of patients (50%) had complain of straining at stools.

Table 6: Bowel habits and straining at stool.

Bowel habits and straining at stool	Number of cases	Percentage
Constipation	18	30
Straining	30	50
Normal	12	20
Total	**60**	**100**

Majority of cases i.e. 100% had bleeding as the predominant symptom.

Table 7: Presenting symptoms of the study group.

Presenting symptoms	Number of cases	Percentage
Bleeding	60	100
Prolapse	12	20
Pain	18	30
Irritation	15	25
Discharge	12	20

Only 25% of the observed cases who underwent rubber band ligation were of grade I internal hemorrhoids and remaining 75 %were of grade II.

Table 8: Grades of haemorrhoids.

Grades	Number of cases	Percentage
Grade I	15	25
Grade II	45	75
Total	**60**	**100**

Maximum number of cases about 30% had discomfort.

Table 9: Post procedure complications.

Post procedure complications	Number of cases	Percentage
Pain or discomfort	18	30
Bleeding	06	10
Urinary retention	03	5
Sepsis	0	0
Vasovagal reflex	0	0

None of the cases had severe discomfort whereas maximum patients about 20% had slight discomfort.

Table 10: Post ligation discomfort.

Post Ligation Discomfort	Number of cases	Percentage
No	42	70
Slight (1-2 days)	12	20
Moderate (≥ 3 days)	06	10
Severe	0	0

70% cases did not require pain relief, whereas 25% cases required it for 1-3 days and 5% for more than 3 days as given in Table 11.

Table 11: Requirement of pain relief.

Requirement of pain relief	Number of cases	Percentage
None	42	70
1-3 days	15	25
> 3 days	03	5
Total	**60**	**100**

Table 12: Time off work.

Time off work	Number of cases	Percentage
None	42	70
1-3 days	12	20
> 4 days	06	10
Total	**60**	**100**

Table 13: Smptoms at follow up.

Symptoms	At Presentation		At 10th day		At 1 months		At 6 months	
	No.	%	No.	%	No.	%	No.	%
Bleeding	60	100	18	30	06	10	03	5
Pain	18	30	09	15	06	10	03	5
Prolapse	12	20	09	15	03	5	-	-
Irritation	15	25	-	-	-	-	-	-
Discharge	12	20	-	-	-	-	-	-

Maximum number of case 70% returned to work the next day, only 10% cases took off work for more than 4 days, whereas 20% were off work for 1 to 3 days as shown in Table 12. At 10th day post rubber band ligation, bleeding seen in 100% cases at presentation decreased to 30%, which further decreased to 10% at 1st month. Pain seen in 30% of cases at presentation decreased to 15% at 10th day and 10% at 1st month. Prolapse observed in 20% of cases at presentation decreased to 15% at 10th day and 5% at 1st month. At 6 months, 5% of cases still had bleeding and 5% had pain as seen in Table 13. 80% cases assessed treatment as excellent and 20% with some residual symptoms assessed the treatment as of moderate help. None assessed treatment as of little help as shown in Table 14.

Table 14: Patient assessment of treatment.

Patient assessment of treatment	Number of cases	Percentage
Excellent	48	80
Moderate help	12	20
Little help	-	-
Total	**60**	**100**

DISCUSSION

The instrument for RBL was originally described by Blaisdell in 1954 and later modified by Barron.[5] Barron performed RBL in 400 patients with grade I, II and III hemorrhoids and El Nakeeb in 750 patients of grade II and III internal hemorrhoids: both the study proved the efficacy of RBL upto grade III haemorrhoids.[6] Similar study were conducted by JC Bernal et al, Rizwan Mansoor Khan et al, Jeffery PJ et al proving the efficacy of rubber band ligation.[7-9]

CONCLUSION

Rubber band ligation for internal hemorrhoids is an effective modality of treatment in 1^{o} and 2° hemorrhoid which is convenient, simple, cost efficient has high patient acceptance with limitations as post procedure discomfort and pain.

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Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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