

# Comparison of Band Ligation With Haemorrhoidectomy in Second and Early Third Degree Haemorrhoids

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**A three years study from December 1995 to November 1998 was carried out at the surgical Unit I Sir Ganga Ram Hospital Lahore . This study comprised of 80 patients with second degree primary haemorrhoids . It included 45 female and 35 male patients. There was an equal distribution of 40 patients for each treatment modality in our study. Incidence of complications such as post operative bleeding, post operative pain and recurrence was much less in patients who had band ligation as compared to those with haemorrhoidectomy.**

**Key Words : Band ligation, haemorrhoidectomy**

Haemorrhoid is a Greek word from haema and rhoos meaning flowing blood. Piles is a Latin word originating from Pila meaning a ball. Both these words emphasize the bleeding and protrusion, two cardinal symptoms of haemorrhoidal disease<sup>1</sup>.

Treatment of haemorrhoids is as old as mankind itself. Hippocrates recommended burning out haemorrhoids by placing the patient on his back and averting the anus as much as possible with the fingers. In 10<sup>th</sup> century AD great muslim surgeon El-Zahravy described cautery for the treatment of haemorrhoids. In the 15<sup>th</sup> century wood cutter was used for surgical treatment of haemorrhoids. Salmon in 19<sup>th</sup> century made great practical advancement in haemorrhoidal surgery when he showed that main blood supply of haemorrhoids is superior rectal artery<sup>2</sup>. He also mentioned that pile is covered by sensitive epithelium. Now a days ligation and excision is widely used surgical approach all over the world.

In the general public haemorrhoidectomy has a bad reputation of being very painful , unpleasant and uncomfortable. Severe post operative pain , urinary retention, secondary haemorrhage, stricture, stenosis and incontinence are common sequelae. To reduce these complications various modifications were done in the standard operative techniques. In the recent past there has been a strong trend in favour of day case surgery for the treatment of internal haemorrhoids. The motivating factors are cost effectiveness, better patient satisfaction and lesser risk of complications.

Keeping in view the mentioned factors and to determine the appropriate treatment for our conditions, a prospective study was planned to evaluate the outpatients department treatment namely band ligation and conventional haemorrhoidectomy in patients with 2<sup>nd</sup> and early 3<sup>rd</sup> degree haemorrhoids to judge their value and compliance in our social and health care setup.

## Patients and Methods

This study was carried out in surgical unit I, Sir Ganga Ram Hospital Lahore over a period of three years . It involved 80 Patients with 2<sup>nd</sup> degree primary

haemorrhoids. We admitted 45 female patients and 35 male patients.

Sixty seven patients were admitted through outdoor, nine from emergency and four were referred by the physicians. All the cases were interviewed, examined , investigated and entered on a performa prepared for the purpose. Patients were selected at random. Equal number of patients were allotted to each of these two treatment modalities i.e. band ligation and haemorrhoidectomy.

A detailed history and a thorough physical examination was carried out in every case. All the patients underwent digital, proctoscopic and sigmoidoscopic examination. Blood was transfused to the patients who were anaemic. All the patients were given clean water enemas before carrying out the procedure. All the patients who underwent haemorrhoidectomy received general anaesthesia. All the patients undergoing haemorrhoidectomy were administered pre and post operative antibiotic cover. All the patients who had band ligation treatment were administered 1gm of cephalosporin intravenously at the time of procedure. Patients with band ligation had application of bands at the base of each haemorrhoids .Post operative course of each patient was recorded. Haemorrhoidectomy patients were advised hot sitz bath and local analgesic applications on the first post operative day. Haemorrhoidectomy patients stayed at the hospital for four days on an average. Most of the patients were followed up at one week, one month, and three months interval after receiving treatment.

## Results

In the males the age incidence varied from 21 to 70 years whereas in the females it was from 17 to 65 years. The percentage of males presenting with haemorrhoids was 43.75% and that of females was 56.25%.

Both in the females and males the highest number of patients were in the age group 41-50years. Mean age of the patients was 43years. 83.75% patients were admitted through outpatient department , 11.25% through emergency department and 5% were referred by physicians.(Table I)

## Comparison of Band Ligation With haemorrhoidectomy

Table no I : Age and sex distribution

Age	Male	Female	Total
10-20	0	01	01
21-30	02	05	07
31-40	11	13	24
41-50	16	19	35
51-60	04	02	06
61-70	02	05	07
Total	35(43.75%)	45(56.25%)	80(100%)

According to our study the number of primary haemorrhoids in patients are shown in Table No II. Table No III shows the equal distribution of patients for each treatment modality. Our study also compared the improvement in bleeding per rectum for both modalities of treatment as shown in table no IV.

Table no II: Number of primary haemorrhoids at the time of presentation

No of haemorrhoids	Male	Female	Total	%age
1	11	13	24	30
2	20	26	46	57.5
3	04	06	10	12.5

Table no II : Treatment modalities used in the study

Mode of treatment	Male	Female	Total
Band ligation	18	21	40
Haemorrhoidectomy	17	23	40

Table no IV:

Post operative improvement in bleeding	Band ligation (n=)	Haemorrhoidectomy (n=)
No improvement	0	0
Mild improvement	01(2.5%)	03(7.5%)
Marked improvement	39(97.5%)	37(92.5%)

Table V shows the incidence of pain in both groups. Average hospital stay for patients in case of band ligation group was 6 hours, whereas in haemorrhoidectomy group it was 4 days. Incidence of recurrence in case of haemorrhoidectomy group was 10% whereas in case of band ligation group was 5%.

Table No V : Comparison of severity of post operative pain

Severity of pain	Band ligation(n=)	Haemorrhoidectomy (n=)
Severe	0	01(2.5%)
Moderate	03(7.5%)	05(12.5%)
Mild	03(7.5%)	09(22.5%)
No pain	34(85%)	25(62.5%)

Table no VI : Incidence of recurrence of haemorrhoids

Mode of treatment	n=	%age
Band ligation	02	05
Haemorrhoidectomy	4	10

## Discussion

There are quite few treatment modalities available for haemorrhoidal disease. The continued evolution of new treatments is a testimony to the controversy that surrounds management of this common ailment. For proper treatment patients should be carefully selected and best treatment should be offered to the patients consistent with the nature and extent of symptoms.

Various out patient treatment options described for treatment of haemorrhoids include sclerotherapy, rubber band ligation, cryosurgery, infra red photocoagulation, bipolar coagulation and laser technique. Surgical procedures include manual dilatation of anus and haemorrhoidectomy<sup>3,4</sup>.

Rubber band ligation was included in this study to evaluate its own efficacy and to compare its results with haemorrhoidectomy. This procedure is simpler to perform than all other out patient procedures and the instrument is cheap as compared with the instruments required in other treatment modalities.

Rubber band ligation technique which was introduced by Blaisdell in 1958 and later modified by Barron in 1963 has gained great acceptance as an alternative to operation in 2<sup>nd</sup> degree and early 3<sup>rd</sup> degree haemorrhoids. As a procedure it is painless and if performed correctly and by experienced person no anaesthesia local or general is required.

Incidence of post operative complications such as pain, bleeding, ulceration, urinary retention, incontinence, of faeces and flatus, anal soiling, and anal stenosis are far less in cases of rubber band ligation technique in comparison to open surgical procedures. This procedure has a significant advantage to the patients in regard of comfort and economy.

Results in our study are comparable to many other clinical trials conducted elsewhere in the world. In a study comparing Rubber band ligation and haemorrhoidectomy Murie et.al.<sup>5</sup> concluded that Rubber band ligation should be considered first line of treatment in patients with second and third degree haemorrhoids.

Walker<sup>6</sup> presented a comparison study which showed that band ligation provides more rapid and longer lasting relief from prolapse. Liang CL(1993)<sup>7</sup> presented a success rate even higher than 90% for second and third degree haemorrhoids using rubber band ligation. Mac Rae and Mcleod(1995)<sup>8</sup> presented the results of a meta-analysis of eighteen studies. They recommended rubber band ligation as initial mode of treatment for grade one to three haemorrhoids and haemorrhoidectomy for grade four haemorrhoids.

Associated conditions such as skin tags, fissures, fistulas, external haemorrhoids should be looked for and these cases advised surgery as first choice treatment<sup>9</sup>.

We strongly recommend rubber band ligation as an out patient therapy to the patients with second and early

third degree primary haemorrhoids. Rubber band ligation is an ideal modality of treatment for pregnant ladies and old people with other associated medical conditions. We also recommend early identification of patients with haemorrhoids and education of general public as an integral part of management to decrease morbidity caused by it. Lastly we recommend that this cost effective procedure should be carried out by a well versed and well trained surgeon.

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