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## Research Article

# A COMPARATIVE STUDY OF YAVAKSHAR PRATISARAN (LOCAL APPLICATION) AND BARRON'S BAND LIGATION IN MANAGEMENT OF ARSHA WITH SPECIAL REFERENCE TO INTERNAL HAEMORRHOID

Shubhangi Wankhedkar<sup>1</sup>, Aparna Raut<sup>2</sup>, Yogesh Surse<sup>3</sup> and Ramesh Ahire<sup>4</sup>

<sup>1,2,4</sup>Department of Shalyatantra, Shree Saptashruni Ayurved Mahavidyalaya, Nashik, Maharashtra, India

<sup>3</sup>Department of Kaumarbhritya, Shree Saptashruni Ayurved Mahavidyalaya, Nashik, Maharashtra, India

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### ABSTRACT

Sushruta has described "Arsha" as one of prime important disease from "Ashtamahagada". The percentage of patients of 'Arsha' is more than any other ano-rectal ailment. Hence, this problem was selected for clinical study. The progressive pathogenesis of the disease produces various discomfoting symptoms like bleeding, prolapse, pain, pruritus etc. Prevention is always better than curebut if unfortunately, the ailment developed it is good practice to eradicate it in earlier stage. Thus II<sup>0</sup>Internal Haemorrhoid (AbhyantarArsha) was proposed in this clinical study to prevent its progress towards III<sup>0</sup>. Acomparative study between the two accepted modality i.e. 'Yavaksharpratisaran' (YKP) and 'Barron's Band ligation' (BBL) is proposed. Well diagnosed and randomly selected total 52 patients of Abhyantar Arsha (Int. haemorrhoids of II<sup>0</sup>) selected for this study irrespective of sex and divided into two groups. Group-A (Yavakshar Pratisaran/ YKP-30 patients) Group – B (Barron's Band Ligation/BBL-22 patients). 1.Degree of Haemorrhoid,2.P/R bleeding, 3.Pruritus ani, and 4.Haemoglobin percentage these four parameters were selected for analyzing the effectiveness of treatment modality. After conducting clinical study, it was found that "Barron's band ligation" was more effective than "Yavakshar-Pratisaran" for reducing 'Degree of Haemorrhoid' & 'P/R Bleeding' of II<sup>0</sup> Internal Haemorrhoids. Both modalities were equally effective for 'Pruritus Ani' & 'Haemoglobin percentage'.

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## INTRODUCTION

Since long time 'Arsha' have been known to mankind as one of the commonest disastrous ano-rectal disease. The progressive pathogenesis of the disease produces various discomfoting symptoms like bleeding, prolapse, pain, pruritusani etc. According to Ayurvedic and Modern text, so many mode of treatment are available to eradicate this ailment. The treatment can be classified into medicinal, parasurgical and surgical management. But no one is perfect due to their associated disadvantages. Both the ruling medicinal branches having their own successful line of treatment. But, comparative study between these established modality had not been done yet. Therefore to carry out a scientific study and to reassess the ancient mode of treatment in the scientific era, the topic "A Comparative study of YavaksharPartisaran (Local Application) and Barron's Band Ligation in Management of Arsha with special reference to Internal Haemorrhoid" was selected.

## Aims

To compare the Yavakshar Pratisaran and Barron's Band Ligation in the management of Arsha, w.r.t. II<sup>0</sup>internal haemorrhoid.

## Objectives

1. Role of YavaksharPratisaran as compare to Barron's Band Ligation.
2. To evaluate patient's friendly mode of treatment.

## Inclusive Criteria

1. Non complicated and well diagnosed cases of II<sup>0</sup> Internal Haemorrhoids not responding to routine conservative management.
2. Patients of both sex and age between 15 to 65 years.

## Exclusive Criteria

1. Complicated II<sup>0</sup> Internal Haemorrhoids and associated with other ano-rectal diseases.

\*Corresponding author: Shubhangi Wankhedkar

Department of Shalyatantra, Shree Saptashruni Ayurved Mahavidyalaya, Nashik, Maharashtra, India

2. II<sup>0</sup> Internal haemorrhoids with systemic complication.
3. Female patients with pregnancy and lactation.

## MATERIALS & METHODS

The objective of the study was to reassess the efficacy of "YavaksharPratisaran" in the management of *Abhyantar Arsha* along with assess the possible advantages of *Yavakshar* over Barron's Band Ligation. This study was carrying out irrespective of *sarvadhik Doshavichara*. Only the local pathology (*Sthan Dushti*) after local application of *Yavakshar* (i.e. Pratisarana) and application of BBL was considered predominantly. The result was presented after statistical analysis.

A clinical study had been carried out in the *shalya-tantra* department of *Ayurved* College and Hospital. This is a randomized controlled study. Only the patients which were not responding to the conservative treatment were included in this study. Well diagnosed and randomly selected total 52 patients of *Abhyantar Arsha* (Int. haemorrhoids of II<sup>0</sup>) selected for this study irrespective of sex and divided into two groups

### Group-A (Yavakshar Pratisaran/ YKP)

In this group *Yavakshar Pratisaran* was conducted.

Instruments required for it as: Proctoscope- large, medium, small size, Probes, Artery forcep (straight), Bowls, Syringes, Dishes, Towel-clips, Eye-towel, Dressing pads, Gauge piece, Cotton swab etc.

**Drugs:-** *Yava-kshar*, *Ghrita*, Fine powder of *Yashtimadhu*, Fresh lime juice, Xylocaine jelly 2%.

*YavaksharPratisaran* was done in Internal Hemorrhoids after appropriate *purvakarma*. The amount of *Yavakshar* was depend upon the size of hemorrhoid The average required amount of *Yava-kshar* was 1.69 gm at one session. If necessary repetition of *Yava-ksharPratisaran* (local application) was carried out after one weekly.

### Group – B (Barron's Band Ligation/BBL)

In this group Barron's band ligation was conducted as per standard method Instruments require for it as:-Barron's Band Ligation Gun, Sklar Rubber Band, Proctoscope- large, medium, small size, Xylocaine jelly 2%.

Barron's Band ligation was conducted as per standard method. Appropriate antibiotic and analgesic was given 5 days post operatively. Bulk forming and stool softening agents like Isabgol along with identical dietary regimen and sitz bath had been advised to patients in both groups.

After last session of *Yavakshar Pratisaran* and postoperative 5<sup>th</sup> day of Barron's Band ligation a complete objective and subjective assessment was done. The residual symptoms were noted. Proctoscopic examination was carried out to examine size, number of piles and bleeding per rectum if any present.

Detail history of the patient was recorded in standard case record format. Thorough clinical examination and proctoscopic examination was done along with essential laboratorial examinations. After that patient was selected for procedure.

After the procedure, the patient were advised for regular follow up on 7th, 14th, 21st and 28th day on which observations were noted.

### Parameters

The criteria were assessed in the manner stated below was regarded to each patient as:

#### Degree of Haemorrhoid

I-Degree	Haemorrhoid slightly projecting in lumen of the anal canal during effect of defecation
II- Degree	The hemorrhoid mass prolapsed out of anal verge on straining, but returning spontaneously to the anal canal when motion has been passed and the defecation effort has ceased
III- Degree	The prolapsed hemorrhoid mass does not reduce spontaneously even after cessation of straining. They had to be replacing manually
IV- Degree	Completely irreducible hemorrhoid, usually these are long standing and acquires a component of skin.

Degree of hemorrhoid was recorded after 7th day of treatment.

#### Per-Rectum Bleeding

Severe (+++)	It was considered to be severe if the patient had profuse bleeding either in the stream or in drops amounting more than 20 drops / bowel habit
Moderate (++)	It was considered to be moderate if the patient had droplet bleeding amounting between 10 to 20 drops
Mild (+):	It was considered to be mild if the patient had bleeding streaking to the stool or less than 10 drops
Absent (0)	It was considered to be absent if the patient had no any bleeding during defaecation.
	Severity of bleeding per rectum according to above gradation was recorded on each follow-up

**Haemoglobin percentage (Hb %)-** For the sake of objective assessment of bleeding per rectum, the Hb% before treatment and at the last follow-up was recorded.

**Pruritus ani:** Only subjective assessment was possible in case of pruritus as per statement of patient regarding relief from above symptoms. Hence subjective parameter was converted into objective as presence (+) or absence (0) of the symptoms before and after treatment.

#### Obseravations & Stastics

In present scientific study the patients were specifically observed for Degree of Haemorrhoid, Bleeding per Rectum, Pruritus and Hemoglobin percentage. The observations were noted before and after completion of treatment and on each follow up day. For each above mentioned parameter, statistical significance was calculated separately. In group B, there was 1 patient in which complication occurred due to slippage of band. Hence while applying statistics to both groups, this 1 patient was excluded from group B. Thus the numbers of patients in group B were considered as 21. Since the observations were quantitative and sample size was small, "student's paired 't' test" was applied for individual group significance. To compare significance between two studied group "Unpaired't' test" was applied.

**Degree of Hemorrhoid**

**Table 1** Comparative study of Degree of Hemorrhoid

Follow up Day	n	$\bar{X}_1$	X2	S.E.	t	P
0 <sup>th</sup> -7 <sup>th</sup>	51	0.3	1.66	0.114	11.98	P<0.05
7 <sup>th</sup> -14 <sup>th</sup>	51	0.23	0	0.061	3.83	P<0.05
14 <sup>th</sup> -21 <sup>st</sup>	51	0.23	0	0.061	3.83	P<0.05
21 <sup>st</sup> -28 <sup>th</sup>	51	0	0	0	0	0
0 <sup>th</sup> -28 <sup>th</sup>	51	0.76	1.66	0.111	8.09	P<0.05

“Degree of Hemorrhoid” was significantly reduced in both groups. In group A, it was significantly reduced after 14<sup>th</sup> day while in group B, it was reduced significantly after 7<sup>th</sup> day. But in group-A, it was steady after 21<sup>st</sup> day, at the same time; it was steady after 7<sup>th</sup> day in Group-B. Overall at last follow up in both groups it was significant.

**Per rectal bleeding**

“P/R Bleeding” was significantly decreased in 0<sup>th</sup> to 7<sup>th</sup> days of treatment. But after that it was gradually decreased up to 21<sup>st</sup> day of follow up & then it was remaining constant up to 28<sup>th</sup> day.

**Table 2** Comparative study of P/R Bleeding

Follow up day	N	$\bar{X}_1$	$\bar{X}_2$	SE	t	P
0 <sup>th</sup> -7 <sup>th</sup>	51	0.76	1.09	0.86	3.79	P<0.05
7 <sup>th</sup> -14 <sup>th</sup>	51	0.5	0.47	0.10	0.23	P>0.05
14 <sup>th</sup> -21 <sup>st</sup>	51	0.5	0.28	0.09	2.20	P<0.05
21 <sup>st</sup> -28 <sup>th</sup>	51	0.33	0	0.06	4.91	P<0.05
0 <sup>th</sup> -28 <sup>th</sup>	51	2.1	1.85	0.01	1.97	P>0.05

**Pruritus Ani**

“Pruritus Ani” was significantly reduced in group A upto 14<sup>th</sup> day of follow up & in group B up to 7<sup>th</sup> day of follow up after which it was insignificant in both group. “Pruritus Ani” was significantly reduced in group A than group B. But overall after last follow up it was insignificant.

**Table 3** Comparative study of Pruritus Ani

Follow up Day	Group A(n=30)		Group B(n=21)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D
0 <sup>th</sup>	0.7	0.47	0.59	0.5
7 <sup>th</sup>	0.3	0.47	0.32	0.48
14 <sup>th</sup>	0.1	0.31	0.05	0.21
21 <sup>st</sup>	0.00	0.00	0.00	0.00
28 <sup>th</sup>	0.00	0.00	0.00	0.00

**Hemoglobin Percentage**

**Table 4** Comparative study of “Hemoglobin Percentage”

Follow -up Day	Group A(n=30)		Group B(n=21)	
	$\bar{X}$	S.D.	$\bar{X}$	SD
Before Treatment	10.91	1.94	10.49	2.11
After Last Follow-up	11.66	1.40	11.16	1.45

The above table shows that average effect of treatment on “Hemoglobin Percentage” in group A & group B. Mean of “Hemoglobin Percentage” was increased gradually in both groups.

**Table showing comparative effect in between the treatments**

**Table 5** Comparative study of “Hemoglobin Percentage”

N	$\bar{X}_1$	$\bar{X}_2$	SE	T	P
51	0.07	0.04	0.056	0.51	P>0.05

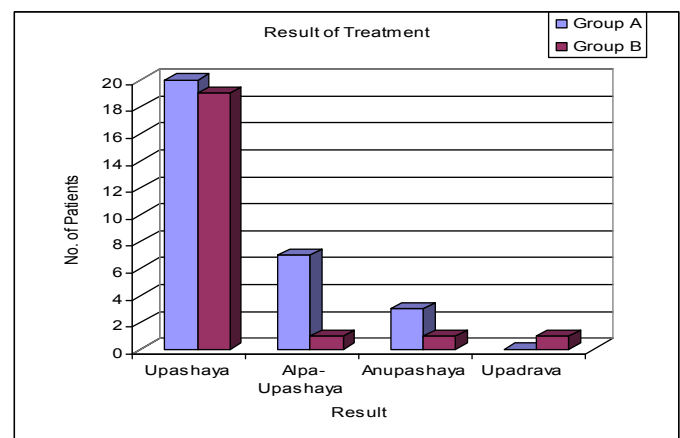
The above table shows that increased in “Hemoglobin Percentage” were insignificant statistically.

**Result of Treatment-**As far as result of treatment is concerned total 20 patients gets completely cured in group ‘A’ and 19 patients in group ‘B’. 7 patients of group ‘A’ and only 1 patient of group ‘B’ having improvement. Group ‘A’ having 3 uncured patients and Group ‘B’ having 1 uncured patients. There were no any type of complication observed in group A & there was 1 patient in which complication occurred during treatment in group B. Thus, out of total 52 patient, 39 patients were completely cured, 8 patients had improvement, 4 patients were uncured & and only 1 patient suffered from complication.

**Table 6** Result of Treatment

Result	Group-A	Group-B	Total
1) Upashaya (Completely cured)	20 (66.66%)	19 (86.36%)	39 (75%)
2) Alpa-Upashaya (Improved)	7 (23.33%)	1 (4.5%)	8 (15.38%)
3) Anupashaya (Uncured)	3 (10%)	1 (4.5%)	4 (7.69%)
4) Upadrava (Complicated)	0 (0%)	1 (4.5%)	1 (1.92%)
Total	30	22	52

$\chi^2 = 3.5713$        $P > 0.05$



**DISCUSSION**

The statistical analysis of the observational parameters clears that both the modalities decreases/reduces size of hemorrhoid according to change of degree. But overall the Barron’s Band Ligation was significant than *Yavaksharpratisaran*. Because after BBL there was complete removal of the haemorrhoidal mass but, *Yavakshar* reduces the size only by its local medicinal scrubbing i.e *Ksharan & kshanan*.

Both modalities reduce P/R bleeding but Barron’s Band Ligation significantly reduces at 0-7<sup>th</sup> day’s i.e in early phase of treatment. This is may be due to complete excision of hemorrhoidal mass by BBL which causes P/R bleeding.

As far as the pruritus ani is considered, it was reduced in both the groups significantly at 0-7<sup>th</sup> days. Overall the last follow up it was insignificant. This was because upto 7<sup>th</sup> day both

modality significantly reduces the prolapsing haemorrhoidal mass & P/R bleeding due to which there was decreased chances of cloth soilage & improvement of local hygiene by sitz bath also. Due to decrease in prolapsing mass overall psychological disturbance of the sufferer was also minimizes as the patient becoming symptoms free.

**There are some possible disadvantages of Barron's Band Ligation as**

1. It reduces size of hemorrhoid by disturbing normal anal anatomy.
2. Primary or secondary bleeding.
3. Post-operative pain due to improper surgical technique.
4. Infection of the ligated pile mass.
5. Limited scope in multiple positioned haemorrhoids.
6. Requirement of surgical skill.
7. Complication like breaking or sleeping of rubber band may occur.

**Comparatively Yavaksharpratisaran having advantages like**

1. It reduces size of haemorrhoids without disturbing normal anal anatomy.
2. It is most easy methodology.
3. We can apply the drug to over all positioned hemorrhoids mass at a time that means it doesn't take extra period for treating each hemorrhoid individually.
4. Doesn't require any special surgical skill.
5. It is cost effective.

## CONCLUSION

Statistically the conclusion of the study:

“Barron's band ligation is more effective than Yavaksharpratisaran in the management of Abhyantar Arsha (Internal Hemorrhoid).”

But, Barron's Band Ligation needs hospitalization of the patient and has some disadvantages like slippage of band, post-operative hemorrhage, pain which has been overcome by Yavakshar-Pratisaran. Thus, Yavakshar Pratisaran is patients friendly mode of treatment than rubber band ligation.

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