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Elvation Of Efficacy Of Moolaka Kshara Sutra In The Management Of Arshas

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ABSTRACT: A hemorrhoidal condition, which affects the ano - rectal area and is characterised by engorgement of the hemorrhoidal venous plexus, is relatively prevalent. Due to the difficulties in managing it, the condition is categorized under Ashtamahagadas in the Ayurvedic classics and termed as Arshas. The classical characteristics of Arshas are consistent with the prolapse, bleeding, itching, and discomfort associated with haemorrhoids as signs and symptoms. *Acharya Sushruta* mentioned four therapeutic approaches for the therapy of Arshas, Acharya Chakrapani has cited the Ksharasutra as a therapy method which have the ability to cut and heal. Because it combines Shastrakarma and Ksharakarma, the Ksharasutra therapy has recently gained standardization and popularity..60 patients diagnosed with Arshas were selected. They were randomly allocated into two groups i. e. Group A (Standard group – Apamarga Ksharasutra ligation) and Group B (Trial group – *Moolaka* Ksharasutra ligation). The symptoms were completely relieved in all the 60 patients of both the groups within 28 days after the procedure. Those patients who underwent Apamarga Ksharasutra ligation showed slight faster sloughing and falling of the pile mass than those who underwent Moolaka Ksharasutra ligation. But both the Ksharasutras were having almost similar effect. There was no recurrence noticed till 60th post - operative day. This study established the effectiveness of Ksharasura in the control of Arshas and identified Moolaka Ksharasutra as a powerful and effective substitute for ApamargaKsharasutra.

1.INTRODUCTION

Haemorrhoids are present universally in healthy individuals as cushions surrounding the anastomoses between rectal arteries.None the less, the term haemorrhoid is commonly invoked to characterize the pathologic process of symptomatic haemorrhoid disease ,instead of normal anatomic structure [1]

Hemorrhoids are the most common benign anorectal disorder diagnosed in clinical practice and constitute about 50% of colorectal investigations [2]. Its incidence can be seen at any age and in both genders equally. It is estimated that 50-85% of people around the world had hemorrhoids. In India 75% of the population was affected [3].

Haemorrhoids are very rare in nations where people squat to defecate. Its incidence can be seen in any age. Both genders report peak incidence from age 45 to 65 years1. Current statistics suggest nearly half of the world's population will experience some form of haemorrhoids especially when they reach the golden age of fifty.[4]

According to Acharya Susrutha, managemet of Arsas includes Bheshaja, Kshara karma, Agni karma, and Sastra karma[5]. Acarya Chakrapani has mentioned Ksharasutra as a treatment modality in the context of management of Arshas[6], which possess cutting and healing properties. The procedure of Ksharasutra ligation can be considered as a "Sastra karma" as excision of pile mass is achieved. At the same time as the thread is processed with successive coatings of kshara, it incorporates the actions of Kshara like Chedana, Bhedana, Lekhana also. Acharya Sushruta has explained 23 drugs for the preparation of Kshara in Ksharapakavidhi Adhyaya; like Aparmarga, Kadali, Arka, Kutaja, Palasha etc[7].

Moolaka is one such a drug described under the Kshara-dashaka in Rajanighantu [8]. Bhavaprakasha Nighantu describes Moolaka having the properties having Tridoshahara, Mridu Virechana, Mutrala, Anaha, Shoola, Arshoghna & Ashmarighna properties [9]. In Kshara form it attains Chedana, Bhedana and Lekhana properties. Rajnighantu describes Moolaka is having Tikshna, Ushna, Katu, Grahi, and promotes the Deepana. It is Guru, and is indicated in Arshas, Gulma, Hridroga, and Vatahara.

Here an attempt is made to evaluate the efficacy of Moolaka Ksharasutra in the management of Arshas.

2.OBJECTIVES OF THE STUDY

1. To evaluate the efficacy of *Moolaka* Ksharasutra in the management of Arshas.

2. To evaluate efficacy of *Moolaka* Ksharasutra in comparison with standard Apamarga Ksharasutra in the management of Arshas.

3.METHODOLOGY

Source of Data:

60 Patients of *Arshas* attending the OPD and IPD of Alva's Ayurveda College and Alva's Health Centre, Moodubidire were selected.

Method of Collection of data:

30 patients suffering from *Arshas* fullfilling the diagnostic and inclusion criteria were divided randomly into two equal groups S and T. 30 patients were treated with *Moolaka Ksharasutra* and 30 with *Apamarga Ksharasutra*.

S GROUP: Patients of this group is treated with *Apamarga Ksharasutra*

T GROUP: Patients of this group is treated with. *Moolaka Ksharasutra*

DIAGNOSTIC CRITERIA

The patients showing classical symptoms of *Arshas* like

1) *Mamsankura* – Mass per anus
2) *Rakta srava* - Bleeding per anus
3) *Guda marga nirodham* - Obstruction in the anal canal
4) Mucous discharge per anus
5) Degree of Pile mass
6) Proctoscopic evaluation-

❖ Number
❖ Position of Pile mass

INCLUSION CRITERIA

- The patients having classical symptoms of *Arshas* will be selected.
- Patients will be selected between the age group of 18-70 yrs of either gender, irrespective of religion, occupation, Socio-economic status.
- Patients diagnosed with 2nd degree, 3rd degree & 4th degree internal haemorrhoids.

EXCLUSION CRITERIA

- Patients suffering secondary to inflammatory diseases like Ulcerative colitis,Crohn's disease, Cirrhosis of Liver.
- Haemorrhoids associated with Fissure in Ano, Fistula in Ano, Anal stricture, Perianal abscess, malignancy and Polyps.
- Patients suffering from HIV, Tuberculosis and Ca of rectum, Hepatitis A, Hepatitis B
- Pregnant women.

LABORATORY INVESTIGATIONS:

TC, DC, ESR, Hb% & RBS	HIV
BT & CT	HbSAg

Table No.21 COATINGS OF *KSHARASUTRA*

Group S- *Apamarga Ksharasutra*	**Group T- *Moolaka Ksharasutra***
Snuhi Ksheera- 11 coatings	*Snuhi Ksheera*- 11 coatings
Snuhi Ksheera + Apamarga Kshara 7-coatings	*Snuhi Ksheera + Moolaka Kshara*-7 coatings
Snuhi Ksheera + Haridra Churna 3coatings	*Snuhi Ksheera + Haridra Churna* 3coatings

PROCEDURE FOR GROUP- S AND GROUP- T

Materials required

Apamarga Kshara sutra, *Moolaka Ksharasutra*, Proctoscope, Anaesthetic gel (lignocaine 2%) , Local anaesthetic drugs (Inj.Lignocaine2%), Syringe with needle, Betadine solution (Povidone iodine) , Surgical spirit, *Yashtimmadhu taila*, Sponge holding forceps, Needle holding forceps, Alli's tissue holding forceps, Pile holding forceps, Scissors, Mosquito forceps, Kidney tray, Half circle cutting body needle, Towel clips, Cut and Hole towels, Sterilized-Cotton Swab, Gauze, Adhesive plaste.

Poorvakarma

- ✓ Informed consent will be taken from the patient.
- ✓ The perianal part will be shaved and prepared.
- ✓ 100ml Soap water enema will be given 2 hours prior to the procedure

Pradhanakarma

- ✓ Patient will be made to lie down in Lithotomy position.
- ✓ The part will be cleaned with betadine and spirit, and the area will be draped with sterilized cut and hole towels.
- ✓ Local Anesthesia (Inj. Lignocaine 2%) is administrated.
- ✓ Anus will be dilated using local anesthetic gel
- ✓ Positions of pile masses will be assessed using proctoscope.
- ✓ Catch hold: Skin will be retracted with Alli's tissue holding forceps to expose the pile mass. Then the pile mass will be held with the help of Pile-holding forceps.
- ✓ Trans-fixation and Ligation: Each pile mass will be transfixed by passing the curved cutting bodied needle mounted with *Ksharasutra* (For group S- *Apamarga Ksharasutra* and group T- *Moolaka Ksharasutra*) at its base. After transfixation of *Ksharasutra*, the pile mass will be ligated with adequate knots. After ligation, the pile mass will be placed in position.
- ✓ Packing will be done using *Yashtimadhu Taila.*
- ✓ The the patient will be shifted to the recovery room.

Paschatkarma

- ✓ Blood pressure, Temperature, Pulse Rate and Respiratory rates will be monitored.
- ✓ Packing will be removed after 3-4 hours.

8 hours after the procedure:

- ✓ Hot water sitz bath will be given for 15 minutes twice daily.
- ✓ *Yashtimadhu Taila Pichu* will be applied per anum (externally) twice daily.
- ✓ Tab. *Triphala Guggulu*- 1 tablet (250mg) thrice a day after food.
- ✓ Tab. *Gandhaka Rasayana*- 1 tablet (125mg) thrice a day after food.
- ✓ *Triphala Choorna* 2 teaspoons with warm water at bed time.
- ✓ Analgesics T. ZERODOL SP (1st 2 day's only),
- ✓ Antibiotics – (Ofloxacin200mg+ Ornidazole (500mg) T. OZEN OZ (5day's) BD

INTERVENTIONS

In Group S and T

- ➢ Study Period: Total study period including observation period and follow up will be of 60 days.
- ➢ Observation period will be of 28 days and the patient will be advised to come on 3rd ,5th ,7th, 14t , 21st and 28th days.
- ➢ Follow up will be done on 45th day and 60th day.

ASSESSMENT CRITERIA

Effect of treatment was assessed on the basis of gradation of both subjective and objective parameters before and after treatment.

Subjective parameters:

- *Ruja* (Pain)
- *Srava* (Discharge per rectum)

Objective parameter:

- Sloughing and falling of pile mass
- Wound healing

1. **PAIN PARAMETER**

Pain	Vas scale	Grading
No pain	0	0
Mild	1-3	1
Moderate	4-6	2
Severe	7-9	3
Worst pain	10	4

2. **BLEEDING PARAMETER**

Bleeding per Rectum	**Grading**
No bleeding	0
along with stool and after defecation	1
Dropping of blood along with stool and after Defecation	2
Profuse bleeding along with stool and after Defecation	3

3.PARAMETER FOR PILE MASS

Presence or absence of pile mass	**Grading**
Absent	0
Present	1

4. PARAMETER FOR WOUND HEALING

Symptoms	**Grading**
Completely epithelialized	1
Epithelializing	2
Granulating	3
No granulating	4
Sloughy	5

SAMPLE SIZE ESTIMATION

- Number of patients taken for the study - 60

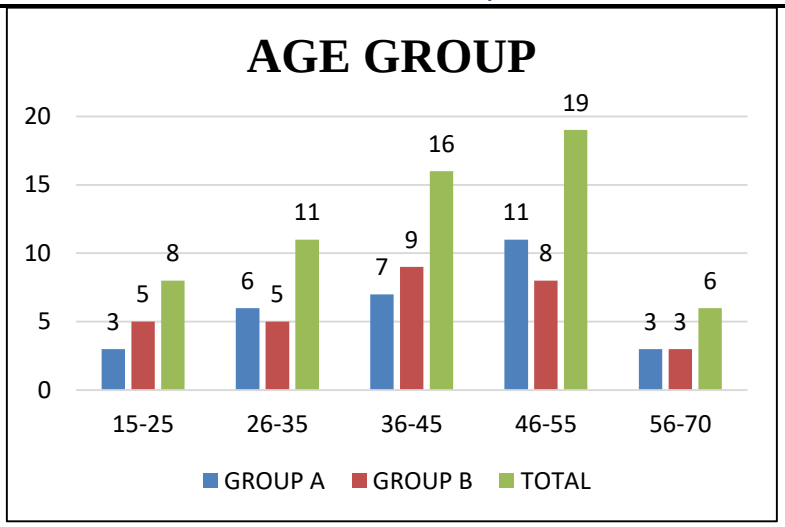
OBSERVATION

60 patients suffering from A*rshas* fulfilling the inclusion and exclusion criteriawere selected for this study and were randomly categorized into two equal groups:

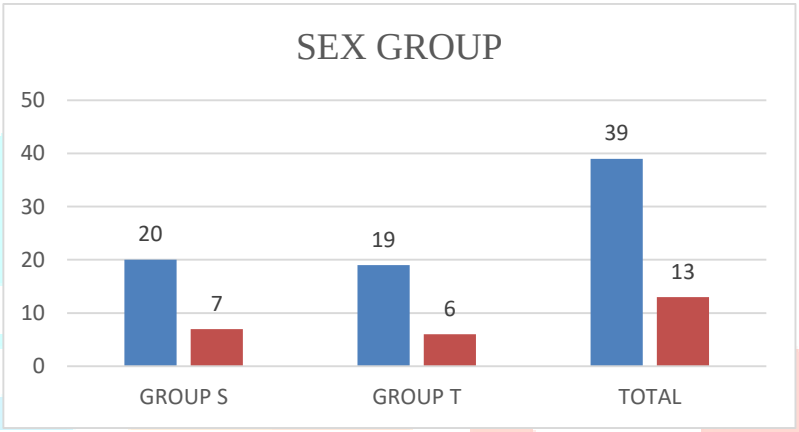
- Group-A (*Apamarga Ksharasutra ligation*)
- Group-B (*Moolaka Ksharasutraligation*)

There were no drop outs in this study. The observations made areas follows.

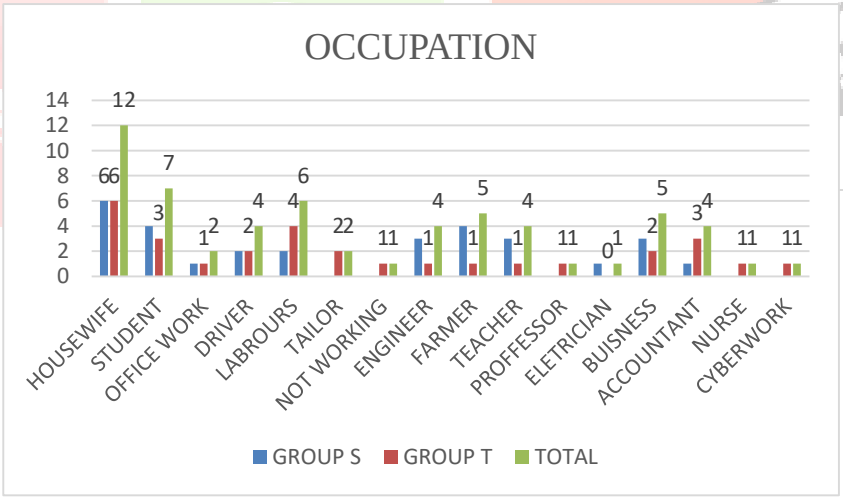
1. AGE GROUPS



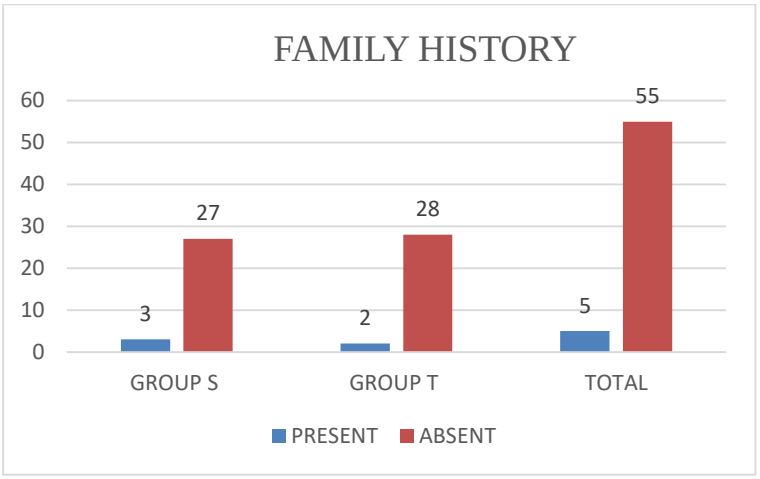
2. SEX



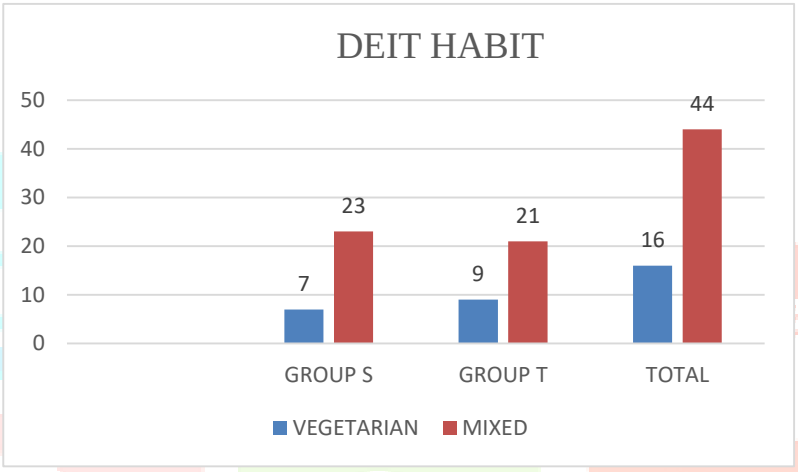
3. OCCUPATION



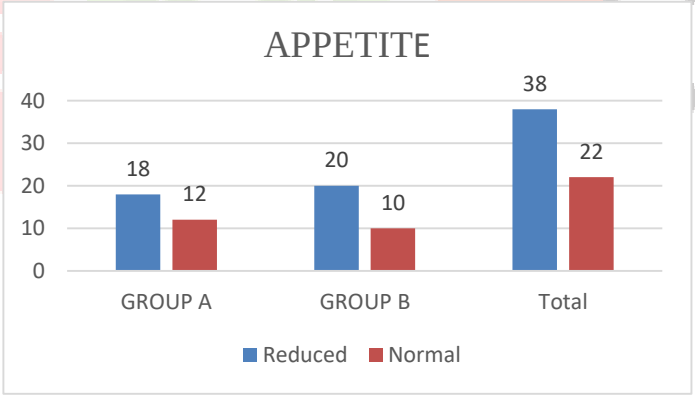
4.FAMILY HISTORY



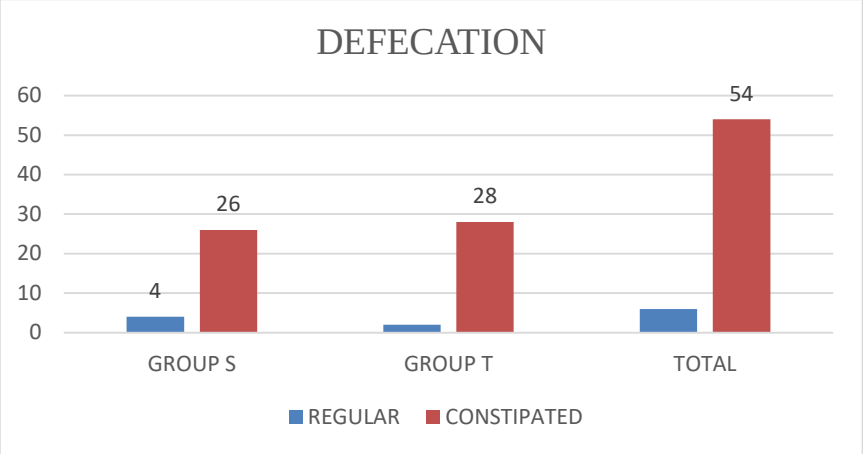
5. DIET HABIT



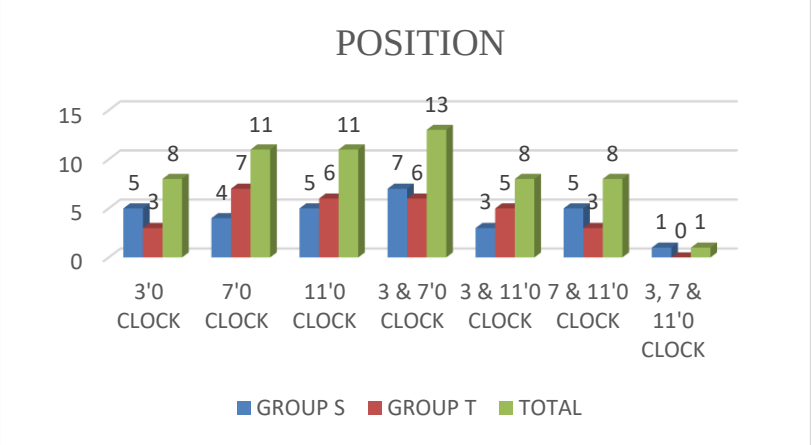
6.APPETITE



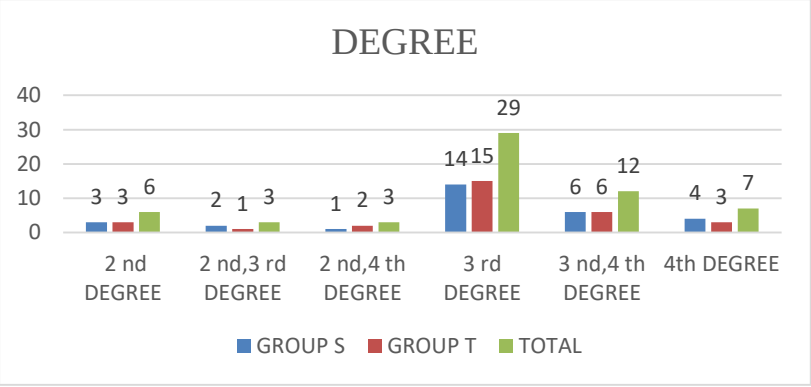
7. BOWEL HABIT



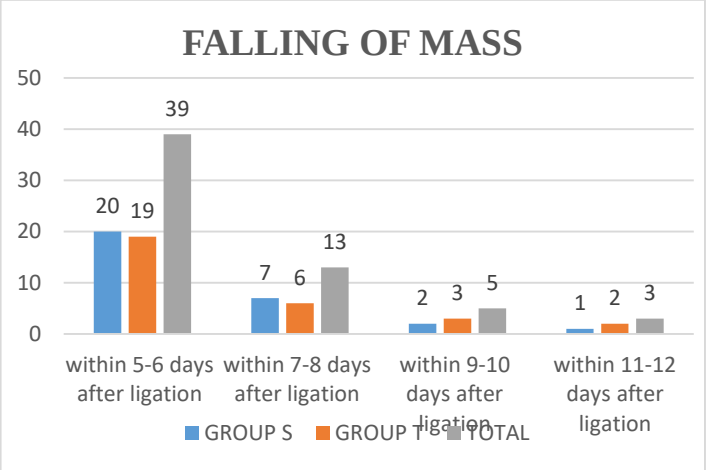
8.POSITION OF PILE MASSES



9.DEGREE OF PILE MASS



10. FALL OF MASS AFTER LIGATION



RESULTS

Statistical analysis

Statistical Package used here is sigma stat version 3.1 .within the group Comparision was done by using Subjective –RM Anova for Ranks for objective –one way RM Anova.Between the group Comparsion Analysis of effect of treatment in all the group was done using

For Subjective –Ranks sum test Objective –Mann whitney test

1.PAIN

Effect of treatment on Pain in Group S

GROUP		Mean ± SD	Comparison	q	P<0.05
GROUP S	BT	3.000±0.000	BT vs DT3	1.236	No
	DT3	2.467±0.507	BT vs DT5	3.166	No
	DT5	1.733±0.583	BT vs DT7	6.151	Yes
	DT7	0.800±0.484	DT3 vs DT5	1.93	No
	DT14	0.000 ± 0.000	DT3 vs DT7	4.915	No
			DT5 vs DT7	2.985	No

- There is a statistically significant difference noted in pain when compared before and during treatment 3rd and 5th ,7th observation. But by 14th day the pain was Compleltely reduced,hence there is a statistical significat difference seen in pain in group s. P=<0.001.

Effect of treatment on Pain in Group T

GROUP		Mean ± SD	Comparison	q	P<0.05
GROUP T	BT	3.000± 0.000	BT vs DT3	1.447	No
	DT3	2.300±0.466	BT vs DT5	3.92	No
	DT5	1.400±0.621	BT vs DT7	5.91	Yes
	DT7	0.800± 0.407	DT3 vs DT5	2.472	No
	DT14	0.000 ± 0.000	DT3 vs DT7	4.462	No
			DT5 vs DT7	1.99	No

- There is a statistically significant difference noted in pain when compared before and during treatment 3rd and 5th ,7th observation. But by 14th day the pain was Compleltely reduced , hence there is a statistical significat difference seen in pain in group T. P=<0.001

- **Comparative analysis of PAIN between Groups**

PAIN	MEDIAN SCORE		Mann-Whitney test		Remarks
DAYS	GROUP S	GROUP T	T Value	P value	
BT-DT3	1.000	1.000	840.000	P=0.270	NS
BT-DT5	1.000	2.000	788.000	P=0.061	NS
BT-DT7	1.000	2.000	788.000	P=0.061	NS
BT-FU60	3.000	3.000	915.000	P=0.994	NS
DT3-DT5	1.000	1.000	849.000	P=0.332	NS
DT3-DT7	2.000	1.000	987.500	P=0.286	NS
DT3-FU60	2.000	2.000	990.000	P=0.270	NS
DT5-DT7	1.000	1.000	1037.000	P=0.072	NS
DT5-FU60	2.000	1.000	1042.000	P=0.061	NS
DT7-FU60	1.000	1.000	912.000	P=970	NS

- On Comparing the effect of the group S and group T on pain it suggests that there is a no significant difference between the group on comparing the difference treatment of observation time point. This suggests that the trial drug & has a difference in its effect on pain in Arshas

2.BLEEDING

Effect of treatment on Bleeding in Group S

GROUP		Mean ± SD	Comparison	q value	P<0.05
GROUP S	BT	1.933 ± 0.828	BT vs DT3	7.4	Yes
	DT3	0.1000 ± 0.305			
	DT5	0.000 ± 0.000	BT vs DT5	8.2	Yes

- There is a statistically significant difference noted in bleeding when compared before and during treatment 1st and 3rd observation. But by day 7 the bleeding was nill and hence there is a statistical significant difference seen in bleeding in group s. P=<0.001

Effect of treatment on Bleeding in Group

GROUP		Mean ± SD	Comparison	q value	P<0.05
GROUP T	BT	2.100 ± 0.305	BT vs DT3	8.3	Yes
	DT3	0.1000 ± 0.305			
	DT5	0.000 ± 0.000	BT vs DT5	9.1	Yes

- There is a statistically significant difference noted in bleeding when compared before and during treatment 1st and 3rd observation. But by day 7 the bleeding was nill and hence there is a statistical significant difference seen in bleeding n group T. P=<0.001

BLEEDING	**MEDIAN SCORE**		Mann-**Mann-whitney test**		Remarks
DAYS	**Group S**	**Group T**	**T Value**	**P value**	
BT-DT3	2.000	2.000	884.500	P=0.656	NS
BT-DT5	2.000	2.000	892.500	P=0.744	NS
BT-DT7	2.000	2.000	892.500	P=0.744	NS
BT-FU60	2.000	2.000	892.500	P=0.744	NS

DT3-DT5	0.000	0.000	915.000	P=0.994	NS
DT3-DT7	0.000	0.000	915.000	P=0.994	NS
DT3-FU60	0.000	0.000	915.000	P=0.994	NS
DT5-DT7	0.000	0.000	915.000	P=0.994	NS
DT5-U60	0.000	0.000	915.000	P=0.994	NS
DT7-FU60	0.000	0.000	915.000	P=0.994	NS

Comparative analysis of BLEEDING between Groups

- On comparing the effect group S & group Ton Bleeding suggests that there is no significant differences between the groups on comparing the difference of treatment of all observation time points. This suggests that the trial drug tstandard drug has no differences in its effect on bleeding in Arshas.

3.SLOUGHING AND FALLING

Effect of treatment on Sloughing and falling of pile mass in Group S

GROUP		**BT Mean ± SD**	**Comparison**	**q**	**P<0.050**
GROUP S	BT	1.000 ±0.000	DT5 vs. DT7	1.795	NO
	DT5	0.367 ± 0.490	DT5 vs. DT14	9.873	YES
	DT7	0.300 ± 0.466	DT7 vs. DT14	8.078	YES
	DT14	0.000 ± 0.000	DT14 vs DT21	0.000	NO

- There is a statistically significant difference noted in Sloughing and falling when compared before and during treatment 5st and 7th day observation. But by day 14 the sloughing and falling was not there and hence there is a statistical significant difference seen in sloughing and falling of pile mass group S. P=<0.001

Effect of treatment on Sloughing and falling of pile mass in Group T

GROUP		Mean ± SD	Comparison	q	P<0.050
GROUP T	BT	1.000 ± 0.000	DT5 vs. DT7	1.714	NO
	DT5	0.367 ± 0.490	DT5 vs. DT14	9.429	YES
	DT7	0.300 ± 0.466	DT7 vs. DT14	7.714	YES
	DT14	0.000 ± 0.000	DT14 vs DT21	0.000	NO

- There is a statistically significant difference noted in Sloughing and falling when compared before and during treatment 5st and 7th day observation. But by day 14 the sloughing and falling was not there and hence there is a statistical significant difference seen in sloughing and falling of pile mass group T. P=<0.001

Comparative analysis of sloughing and falling pile mass between Group

SLOUGHING AND FALLING	MEDIAN SCORE		Mann-whitney test		Remarks
DAYS	Median Group S	Median Group T	T Value	P value	
BT-DT5	-1.000	-1.000	915.000	P=0.994	NS
BT-DT7	-1.000	-1.000	915.000	P=0.994	NS
BT-FU60	-1.000	-1.000	915.000	P=0.994	NS
DT5-DT7	0.000	0.000	915.000	P=0.994	NS
DT5-U60	0.000	0.000	915.000	P=0.994	NS
DT7-FU60	0.000	0.000	915.000	P=0.994	NS

On comparing the effect group S & group T on sloughing and falling suggests that there is no significant differences between the groups on comparing the difference of treatment of all observation time points.

This suggests that the trial drug the standard drug has no differences in its effect on Sloughing and falling in Arshas .

4.Wound healing

Effect of treatment on Wound healing in Group S

GROUP		Mean ± SD	Comparison	Q	P<0.05
GROUP S	BT	0.000 ± 0.000	BT vs DT5	9.913	Yes
	DT5	3.167 ± 2.451	BT vs DT7	13.603	Yes
	DT7	4.033 ± 0.850	BT vs DT14	11.516	Yes
	DT14	2.983 ± 0.482	BT vs DT21	9.652	Yes
	DT21	2.250 ± 0.487	BT vs DT28	4.957	Yes
	DT28	1.017 ± 0.0913	BT vs FU60	4.845	Yes
	FU60	1.000 ± 0.000	DT5 vs DT7	3.69	No
			DT5 vs DT14	1.603	No
			DT5 vs DT21	0.261	No
			DT5 vs DT28	4.957	Yes
			DT5 vs FU60	5.068	Yes
			DT7 vs DT14	2.087	No
			DT7 vs DT21	3.95	No
			DT7 vs DT28	8.646	Yes
			DT7 vs FU60	8.758	Yes
			DT14 vs DT21	1.863	No
			DT14 vs DT28	6.559	Yes
			DT14 vs FU60	6.671	Yes
			DT21 vs DT28	4.696	Yes
			DT21 vs FU60	4.808	Yes
			DT28 vs FU60	0.112	No

- There is significant difference found in all time points when compared to Before treatment , but there is significant difference when comparing different during the treatment time points.But the mean comparision shows a decresing pattern which suggests wound healing to be progressive and is completely healed by 28th day in group S . P=<0.001.

Effect of treatment on Wound healing in Group T

GROUP		Mean ± SD	Comparison	q	P<0.050
GROUP T	BT	0.000 ± 0.000	BT vs. DT5	17.149	Yes
	DT5	3.167 ± 2.451	BT vs DT7	19.044	Yes
	DT7	3.517 ± 1.423			
	DT14	3.067 ± 0.963	BT vs. DT14	16.607	Yes
	DT21	2.183 ± 0.701	BT vs. DT21	11.824	Yes
	DT28	1.000 ± 0.000	BT vs. DT28	6.228	Yes
	FU60	1.000 ± 0.000	BT vs FU60	5.415	Yes
			DT5 VS DT7	1.895	No
			DT5 vs. DT14	0.542	No
			DT5 vs. DT21	5.325	Yes
			DT5 vs. DT28	10.921	Yes
			DT5 vs. FU60	11.733	Yes
			DT7 vs. DT14	2.437	No
			DT7 vs. DT21	7.221	Yes
			DT7 vs. DT28	12.817	Yes
			DT7 vs. FU60	13.629	Yes
			DT14 vs.DT21	4.784	Yes
			DT14 vs.DT28	10.38	Yes
			DT14 vs.FU60	11.192	Yes
			DT21 vs.DT28	5.596	Yes
			DT21 vs.FU60	6.408	Yes
			DT28 vs.FU60	0.812	No

- There is significant difference found in all time points when compared to before treatment sss, but there is significant difference when comparing different during the treatment time points.But the mean comparision shows a decresing pattern which suggests wound healing to be progressive and is completely healed by 28th day in group . P=<0.001

Wound Healing	Median score		Mann-whitney test		Remarks
DAYS	Group S	Group T	T Value	P value	
BT-DT7	1.000	1.000	893.500	P=0.756	NS
BT-DT14	2.000	2.000	901.500	P=0.848	NS
BT-DT21	3.000	3.000	891.500	P=0.734	NS
BT-FU28	4.000	4.000	957.000	0.539	NS
BT-FU60	4.000	4.000	915.000	P=0.994	NS
DT7-DT14	1.000	1.000	972.000	P=0.403	NS
DT7-DT21	2.000	2.000	932.500	P=0.801	NS
DT7-DT28	3.000	2.000	1014.000	P=0.145	NS
DT7-FU60	3.000	2.750	992.500	P=0.255	NS
DT14-DT21	1.000	1.000	860.000	P=0.419	NS
DT14-DT28	2.000	2.000	953.000	P=0.579	NS
DT14-FU60	2.000	2.000	918.500	P=0.965	NS
DT21-DT28	1.000	1.000	988.000	P=0.283	NS
DT21-FU60	1.000	1.000	946.000	P=0.651	NS
DT28-FU60	0.000	0.000	824.000	P=0.179	NS

- On comparing the effect group S & group T on Wound healing suggests that there is no significant differences between the groups on comparing the difference of treatment of all observation time points.This suggests that the trial drug the standard drug has no differences in its effect on wound heal

DISCUSSION

DISCUSSION ON MODE OF ACTION:

The procedure of "*Ksharasutra ligation*" is similar to haemorrhoidectomy in contemporary medical science. Because of the *Ksharana guna, Kshara* cauterizes the pile mass directly.

Along with *Kshara,* here we have the added effects of *Snuhi ksheera* and *Haridra*. *Kshara* and *ksheera* present in *ksharasutra* produces debridement of tissue by way of proteolytic enzymes present in it. The coagulation of protein in the haemorrhoidal plexus leads to disintegration of haemoglobin into heam and globin. The *Ksharasutra* excerts mechanical strangulation over the haemorrhoidal vein, which leads to necrosis of haemorrhoidal mass. Synergy of corrosive effect and striangulation effect results in decrease in the size of pile mass and necrosis of haemorrhoidal tissue. This tissue slough out as blackish mass along with *sutra* in 5-12 days. Later the tissue becomes fibrosed with scar formation. This fibrosis permanently obliterates the haemorrhoidal vein, and recurrence of haemorrhoids is prevented. The resulting ulcer will heal consequently.

The advantages of *Ksharasutra* ligation are less chances of stricture formation due to minimum raw area, less chances of recurrence, fewer chances of post-operative infections and comparatively faster healing of resulting wound after sloughing and falling of the mass.

MODE OF ACTION OF *MOOLAKA KSHARASUTRA*

Moolaka is having qualities of *Katu tikta rasa, , Ushna virya* and *Katu vipaka*. In *Kshara* form even it attains the quality of *Chedana, Bhedana and Lekhana. Moolaka* possess almost the same qualities of *Apamarga,*.

In *Kshara* form it possess extra *Lekhana guna,* which helps in eradicating *Dushita mamsa* and enhances

DISCUSSION ON CLINICAL STUDY:

DISCUSSION ON OBSERVATIONS:

1. **AGE** :In Present study,among 60 patients , 31.33% belong to the age of 46-55years , 26.66% belong to the age of 36-45years , 18.33% belong to the age of 26-35years , 13.33% belong to the age of 15-25years, 10% belong to the age of 56-70years.This may be due to reason that ,most of the people of this middle age group belong to working class,long time sitting,strenuous work,irregular and unwholesome food in this particular age group might be the triggering factors.
2. **SEX**: Among the 60 patients 61.66 patients were males and 38.66 patients were female,maximum number of registered patients are males in the study male patients were more.
3. **OCCUPATION**: The Incidence of occupation shows that, in the present study, among 60 patients maximum patients 20%were housewife ,11% were students ,6% were driver,10% were labours ,6.66 % were engineer,8.33% were farmer,6.66 % were teacher ,8.33 were business . In people who are doing office works prolonged sitting ,avoidances of natural urges ,ireegular food habits,due to past delivery etc may be the reason for haemorrhoids and vigourous physical activity is a directly etiology for the

diseases.

4. **FAMILY HISTORY**:Among 60 patients ,8.33% patients had family history and 91.66% does not have family history.maximum number of patients does not have family history of haemorroids .In this diseases the hereditary factors does not play an important role as a cause.
5. **DIET** : Among 60 patients selected for the study .26.66% patients were vegetraians and 73.33% were comsuming mixed diet. The maximum number of participants were consuming mixed diet.because intake of meat ,fish,more spices etc .lead to arshas as they contain more protein and less fibre and are ushna and vidahi.
6. **APPETITE** : Among 60 patient 63.33%of patients were having reduced appetite .36.66% patients were having normal appetite .this points towards the role of Mandagni .sushrutha explained this points as – Visheshathai Mandagni as causative factors in the manifestation of Arshas
7. **NATURE OF BOWEL HABITS**: In this series a maximum of 90% of patients were having constipated bowel.10% patients were having regular bowel habbits Constipation and prolonged straining are widely believed to cause haemorrhoids because hard stool and increased intra abdominal pressure cause obstruction of venous return, resulting in engorgement of haemorrhoidal plexus.
8. **POSITION OF PILE MASS**: In the case of position of pile mass in majority of patients 21.66%, had pile masses at double positions 3 & 7 O Clock Position. The reason is clear rectum is supplied by middle rectal, inferior rectal and superior rectal veins corresponding to 3, 7 and 11 o'clock positions. Engorgement of rectal venous plexus as a result of excess pressuresover blood vessels due to straining is called hemorrhoids.
9. **DEGREE OF PILE MASS**:48.33% of patients were with 3rd Degree hemorrhoids, 4th degree are 11.66% .
10. FALL OF MASS AFTER LIGATION:

    In group A, by 7th day the pile masses have fallen off in 66% of patients. By 14th day it became 100%. That is in group A, complete sloughing and falling of pile masses occurred within 5-10 days. In group B, by 7th day the pilemasses have fallen off in 63.33% of patients. That is in group B, complete sloughingand falling of pile masses occurred within 5-12days. By 14th day it became 100%. This can be due to the slight decreased pH value of *Moolaka kshara*, compared to the standard.

11. HEALING OF WOUND:

    In group S, after falling of mass, in 90% of patients healing of wound occurred within 1-2 weeks and in 10% of patients healing occurred within2-3 weeks. In group T, after falling of mass, in 80% of patients healing ofwound occurred within 1-2 weeks and in 20% of patients healing occurredwithin 2-3 weeks.

12. **RECURRENCE**: No recurrence of pile mass was noticed until 60th post operative day in both the groups.

DISCUSSION ON RESULTS:

A. EFFECT OF TREATMENT ON PAIN

In Group S- Out of 30 patients the mean score of the symptom pain which was 3.000 before treatment, it was reduced to 0.000 with mean difference 3.000 ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001. It may be due to relaxation of the internal sphincter, anal dilatation would help in decreasing anal pressureand , helps in the easy passage of the stools. It might have helped in reducing the pain.

In Group T-Out of 30 patients the mean score of the symptom pain which was 3.000 before treatment, it was reduced to 0.000 with mean difference 3.000 ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001. It may be due to relaxation of the internal sphincter, anal dilatation would help in decreasing resting anal pressure, helps in the easy passage of thestools. It might have helped in reducing the pain.

B.EFFECT OF TREATMENT ON BLEEDING

In Group S- Out of 30 patients the mean score of the symptom bleeding which was 1.933 before treatment, it was reduced to 0.000 with mean difference 1.933, ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001.Since the base of haemoorhioidal masses were ligated ,bleeding was nil after the treatment from 3rd of observation .

In Group T-- Out of 30 patients the mean score of the symptom bleeding which was 2.100 before treatment, it was reduced to 0.000 with mean difference 2.100 ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001Since the base of haemoorhioidal masses were ligated, bleeding was nil after the treatment from 3rd of observation.

C.EFFECT OF TREATMENT ON SLOUGHING AND FALLING OF PILE MASS

In Group S-- Out of 30 patients the mean score of the symptom sloughing and falling which was 0.367 before treatment, it was reduced to 0.000 with mean difference 0.367, ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.00.In group S Complete sloughing and falling of pile masses occurred with 5-10days.this can be due to the pH value of Aparmaga is12.01.

In Group T- Out of 30 patients the mean score of the symptom sloiughing and falling which was 0.367 before treatment, it was reduced to 0.000 with mean difference 0.367 ± 0.000 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001. In group T,Complete sloughing and falling of pile masses occurred with 5-12 days.This can be due to the slight decreased pH value of *Moolaka kshara sutra* compared to the standard.

D.EFFECT OF TREATMENT ON WOUND HEALING

In Group S-- Out of 30 patients the mean score of the symptom wound healing which was 3.167 before treatment, it was reduced to 1.150 with mean difference 3.167± 1.150 on 28th day. The change that occurred with the treatment is greater than would be expected by chance, there is a statistically significant change at P <0.001.Healing of the wound may be due to *varana ropanan* action of *Yasthi madhu taila* in the form of pichu ,mediences stayed on wound for longer duration .and also *Triphala Gugglu and Gandhanka Rasayana* helps in healing faster

In Group T- Out of 30 patients the mean score of the symptom wound healing which was 3.167before treatment, it was reduced to 1.017 with mean difference 3.167, ± 1.017 on 28th day. The change that occurred with the treatment is greater than would be expected by

chance, there is a statistically significant change at P <0.001. Healing of the wound may be due to *varana ropanan* action of *Yasthi madhu taila* in the form of pichu,mediences stayed on wound for longer duration .and also *Triphala Gugglu and Gandhanka Rasayana* helps in healing faster

DISCUSSION ON COMPARATIVE RESULTS OF TWO GROUPS

While comparing the results of Trial group with Standard group the Trial group (*Moolaka ksharasutra)* showed similar results as Standard group (*Aparmarga ksharasutra)* which is Universally used.from assessment 1st day onwards till 28th day of assessment in all parameters showed similar results so *Moolaka kshara sutra* can be used as alternative to *Apmarga ksharasutra* which is easy available and cost effective also.

FIGURE NO 19: KSHARA SUTRA STERILIZATION BY UV

FIGURE NO 19 : HAEMORRHOIDS BEFORE LIGATION

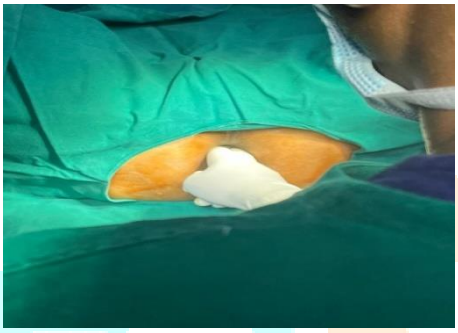


FIGURE NO 17: MATERIAL REQUIRED

FIGURE NO 20: HAEMORRHOIDS AFTER LIGATION

FIGURE NO 21: AFTER FALL OF MASS ON 14TH POST-OPERATIVE DAY

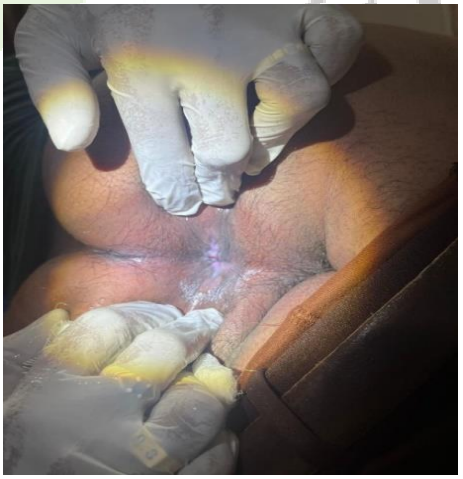


FIGURE NO 22: AFTER FALL OF MASS ON 28TH POST-OPERATIVE DAY

INTRODUCTION

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