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# A comparative clinical study to evaluate the efficacy of Agnikarma by Panchaloha Shalaka and electric cautery in the management of Bahya Arshas with special reference to sentinel pile

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## ABSTRACT

**Background** - The disease *Arsha* is considered to be a *Mahagada* according to the Ayurveda. Among the different types of *Arshas* explained by the Acharya Sushruta the *Lakshanas* of *Bahya Arshas* is looks similar to the structural presentation of the Sentinel pile. This condition, even though rarely fatal, gives more trouble to the sufferer and poses great difficulty for treatment. As we know the Sentinel pile is guarding to the fissure not to heal so keeping in view this clinical study *Agnikarma* with *Panchaloha Shalaka* and Electric Cautery was selected to give new dimension in the management of sentinel pile. **Methodology** - A comparative clinical study was done on forty subjects of both sexes, between the age group of 20-60 years who were randomly assigned into two groups, namely group A where *Agnikarma* by *Panchaloha Shalaka* was used to the subjects and group B where *Agnikarma* by Electric Cautery was used to the subjects. After completion of the study, results were assessed using 'Wilcoxon signed rank test' for Single group and 'Mann-whitney u-test' for comparative Analysis for collected during the study. **Result** - Statistically Both groups proved to be equally Significant. But according to the relief got by the patients Group-A proved to be more effective than group-B. Group-A overall result is 95.71% and Group-B overall result is 91.79%.

**Key words:** *Arsha, Bahya Arsha, Sentinel pile, Agnikarma, Panchaloha Shalaka, Electric cautery.*

## INTRODUCTION

*Arsha* is the commonest condition seen in the practice of proctology. References of this disease can be seen from Vedic period. Due to its chronicity, difficulty in

treating by only medical method, involvement of *Tridoshas* and seat of disease being a *Marmasthana*,<sup>[1]</sup> this disease has been considered under *Ashtamahagada*.<sup>[2]</sup> *Arsha* is clinically categorized into *Bahya* and *Abhyantara* varieties.

The disease *Bahya Arsha*<sup>[3]</sup> can be compared to sentinel pile, as explained in Modern Medical Science, due to similarity in etio-pathogenesis and clinical features. The underlying pathology is, if the acute fissure does not heal readily, secondary changes develop. One of the most striking features is Chronic Ulcer and swelling at the lower end of the fissure, forming the so-called sentinel pile<sup>[4]</sup> which guards the fissure not to heal.

Chronic Anal Fissure is a common and distressing problem, the incidence of which is probably higher than recorded. Most of the Drivers, Office workers,

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Tailors and females complain about this during pregnancy. There is a progress in the understanding of the etio-pathogenesis of this entity and the changing trend in its management approach. The method of treating this pathology should preferably be the one that results in optimal clinical outcome, less painful and patient friendly.

The *Acharya's Charaka* and *Sushruta* both have described four types of measures for the treatment of *Arsha*.<sup>[5]</sup> These are *Bheshaja*, *Kshara*, *Agni* and *Shastra*. *Acharya Charaka* has laid more emphases on *Bheshaja* treatment (medical treatment), whereas *Acharya Sushruta* speaks much about *Kshara*, *Agni*, *Shastrakarma*. While going through the chapter of treatment of the disease "*Arsha*," *Acharya* has given these *Karmas* according to the different *Lakshanas* of the *Arsha*. The *Bahya Arsha* which is explained by the *Acharya Sushruta* having the *Gunas* which fit to the treatment of *Agnikarma*<sup>[6]</sup> explained in *Chikitsastana*.

*Agnikarma* is said to superior than *Ksharakarma*<sup>[7]</sup> and it is the best and most effective procedure amongst all *Anu Shastrakarma*, because of its simple technique and it has important properties like Cutting action, Relaxes the local area, Hemostatic action and the diseases treated with this *Agnikarma* will not relapse.<sup>[8]</sup> So, in the present study, patients suffering from *Bahya Arsha* were subjected to *Agnikarma* procedure, as explained in classical texts. The efficacies of two types of *Agnikarma* by *Panchaloha Shalaka* and Electric cautery are compared. An effort is made in this study to find a simple, safe and cost-effective procedure in the management of *Bahya Arsha* through *Agnikarma* procedure.

## METHODOLOGY

The present clinical study entitled "A comparative clinical study to evaluate the efficacy of *Agnikarma* by *Panchaloha Shalaka* and Electric Cautery in the management of *Bahya Arshas* with special reference to Sentinel Pile" was undertaken.

### Source of the data

Subjects attending Shalyatantra OPD and IPD of Ayurveda Mahavidyalaya and Hospital, Hubballi were selected.

### Methods of collection of data

Forty patients fulfilling the diagnostic criteria were selected irrespective of sex, religion, marital status, socio-economic status and were randomly distributed into two groups.

### Inclusion criteria

- Subjects with the clinical features of *Bahya Arshas* (sentinel pile) were included.
- Subjects with multiple sentinel pile.
- Subjects were selected irrespective of sex and occupation.
- Subjects age groups between 20 and 60.
- Subjects fit for the *Agnikarma*.

### Exclusion criteria

- Subjects with haemorrhoids, anal polyps and fistula in ano.
- Subjects suffering from severe systemic diseases like Tuberculosis, Diabetes Mellitus, hypertension etc.
- Subjects with features of malignancy, anal incontinency, Crohn's disease and peptic ulcer, rectal prolapse with complications.
- Subjects with HIV and HBsAg positive were excluded.
- Subjects with pregnancy were excluded.
- Subjects with Hb% below 8gm.

### Assessment Criteria

The subjective and objective parameters in Subjects were assessed before and after the treatment.

### Subjective criteria

1. *Gudagata daha* (Burning sensation in Anal region)
2. *Gudagata Rakta Srava* (Bleeding per Anus)
3. *Malabadhata* (Constipation)

### Objective criteria

1. Number of sentinel pile
2. Sphincter tone

3. Wound healing time
4. Length of wound

### Criteria for assessment of results

The Assessment of the result was made based on data collected as per subjective and objective parameters in all patients before and after treatment. Separate grading was given for the assessment of parameters.

### Statistical analysis

The information gathered since observation made about various parameters was subjected to statistical analysis in terms of Mean, Standard Deviation and Standard error (SE). Results were assessed using 'Wilcoxon signed rank test' for Single group and 'Mann-whitney u-test' for comparative Analysis. The obtained results were interpreted as:

- Insignificant =  $P > 0.05$
- Significant =  $P < 0.05$
- Highly Significant =  $P < 0.01$  and  $P < 0.001$ .

**Study Design:** A Randomized Comparative Clinical Study

### Sample size and grouping

40 Subjects fulfilling the inclusion criteria were randomly divided into two groups as Group A and Group B consisting of twenty patients each.

**Group A** - Patients were subjected to *Agnikarma* with *Panchaloha Shalaka*.

**Group B** - Patients were subjected to *Agnikarma* with Electric Cautery

Total number of subjects registered for the study - 40

Total number of subjects completed the study - 40

No dropouts or excluded from the study.

### Interventions

#### Application of *Agnikarma* by *Panchaloha Shalaka*

Detailed procedure was explained to the patient and written consent was taken. Patient was made to lie down in a lithotomy position. Anal canal and perianal region painted with aseptic solution and draping was

done. Local anaesthesia with 2% xylocaine is infiltrated around the anal verge. Lords dilatation was done. Sentinel tag/s was held with sponge holder. Cauterized with *Panchaloha Shalaka* and haemostasis achieved. *Jatyadi Ghrita Pichu* was kept.

#### Application of *Agnikarma* by Electric cautery

Detailed procedure was explained to the patient and written consent was taken. Patient was made to lie down in a lithotomy position. Anal canal and perianal region painted with aseptic solution and draping was done. Local anaesthesia with 2% xylocaine is infiltrated around the anal verge. Lords dilatation was done. Sentinel tag/s was held with sponge holder. Cauterized with electric cautery haemostasis achieved. *Jatyadi Ghrita Pichu* is kept.

#### Post procedure medication for Both the Groups

For both group locally *Jatyadi Ghrita Pichu* and *Panchavalkala Avagaha Sweda* was advised for 15 days and internally *Gandhaka Rasayana Vati* 250mg was advised twice a day for 15 days.

#### Observation period

- Initially on the first day before treatment
- On 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day after treatment
- On 28<sup>th</sup> day.

### RESULT

After the observations when results were statically analysed by Wilcoxon signed rank test, in Group-A results were highly significant in all parameters at the end of 28 days duration of treatment. In terms of relief *Gudagata Daha* (Burning sensation) relief at the end of 28 days in Group-A shows 97.78%, in case of *Gudagata Raktashrava* (Bleeding) 100% relief. *Malabadhata* (Constipation) - 93.33% improvement. Regarding Sentinel pile; all the 20 patients showed No Sentinel pile after *Agnikarma* by *Panchaloha Shalaka* and time taken for complete mean wound healing time was 16.5 Days.

In Group-B also results were highly significant in all parameters at the end of 28 days duration of treatment. In terms of relief *Gudagata Daha* (Burning

sensation) relief at the end of 28 days in Group-B shows 92.68%, in case of *Gudagata Raktashrava (Bleeding)* 96.43% relief. *Malabadhata (Constipation)* - 88% improvement. Regarding Sentinel pile; all the 20 patients showed No Sentinel pile after *Agnikarma* by Electric Cautery and time taken for complete mean wound healing time was 18.6 Days.

**Table 1: Overall Result Assessments in Both Groups**

% Relief	No. of Patients in Group A	No. of Patients in Group B	Remarks
<25%	0	0	No Relief
25%-49%	0	0	Mild Relief
50%-74%	0	0	Moderate Relief
75%-99%	07	11	Marked Relief
100%	13	09	Complete Relief

The comparative statistical analyses among two types of *Agnikarma* is carried out by Mann-whitney u-test which showed there is no significant difference among all parameters which suggestive of both groups equally significant in relieving the Parameters. In terms of total relief Subjective criteria's and Objective Criteria's *Agnikarma* by *Panchaloha Shalaka* was found more effective than *Agnikarma* by Electric Cautery. But the difference in values are marginal.

**Table 2: Total effect of therapy in both the Groups**

Group A				Group B			
BT	AT	BT-AT	Percentage	BT	AT	BT-AT	Percentage
210	09	201	95.71%	195	16	179	91.79%

## DISCUSSION

*Arsha* is a disease of long ago. Regarding its description in classics, we can see the references since from Vedic period. Definitions of *Arsha* itself says these are flesh

projections that create obstruction in the anal passage and kills the life like an enemy. Because of this nature of the disease, it has been given a synonym called '*Hatanama.*' *Mandagni* is the chief causative factor of the disease and *Vibanda*, *Gudagata Rakta shrava*, *Gudagata Shoola* and *Arshankura Prateeti* are the classical features of this disease. Even *Arsha* is a broad term used for many conditions that occur in *Guda Bhaga*. These conditions are Haemorrhoids, Anal Epitheliomas, Polyps, Hypertrophied papillae, Skin tags etc.

Thus, after critical analyses on Ayurvedic and modern description, the disease *Bahya Arsha* can be very conveniently compared to the disease Sentinel pile described in modern medical science.

### Probable Mode of Action by Agnikarma

It pacifies *Vata* and *Kapha Doshas*. In *Bahya Arsha Vata* and *Kapha Doshas* are predominant, hence this procedure is beneficial in this disease. *Agnikarma* increases local *Dhatwagni* and thus helps curing disease as well as reducing the chance of recurrence. By *Tapta Shalaka* when *Agnikarma* is performed there will be no fear of *Paka*.

### Action of Jatyadi Ghrita

In present study *Jatyadi Ghrita* is used in the form of *Pichu* to overcome the effect of *Agnidagdha Vrana*. *Tikta Rasa* has the property of *Twak-Mamsa Sthireekarana* and *Lekhana*. It may help in increasing tensile strength of *Vrana* and removing slough tissue. *Katu Vipaka* has *Vrana Shodhana* and *Avasadana* properties. Due to *Laghu Guna* the *Vrana* gets *Laghuta* and *Dosha Pachana* occurs. *Ushna Veerya* helps to penetrate the drug up to the site of *Vrana*. *Tutha* is one among the ingredients of *Jatyadi Ghrita*. It is having *Lekhana Karma* properties. So, it may help in removal of slough. Even in current surgical practice copper sulphate is used in removing slough from the ulcers. *Siktha* is *Jantughna*, *Vrana Ropana* and *Sandhaniya* properties. *Goghrita* is having the property of *Sheeta Veerya*, *Madhura Rasa* & *Tridoshahara*. *Goghrita* has *Samskara Anuvartana* property. Through *Yogavahi Guna* it carries the active principle of the drugs at the level of body tissue. As *Jatyadi Ghrita* includes the

drugs which possess both *Shodhana* and *Ropana* qualities it help in proper healing of *Vrana* formed by *Agnikarma*.

#### Action of *Panchavalkala Kashaya*

The stem bark of *Ksheeri Vraksha* are called as *Panchavalkala*. *Pancha Valkala* drugs comprise of *Kashaya*, *Madhura Rasa*, *Sheeta Veerya* and *Katu Vipaka* (except *Pareesha-Madhura Vipaka*). Among the properties of *Panchavalkala* enlisted by *Bhavaprakasha*, *Vrana* and *Shopa Harana* are very much concerned to this study and recommended as par excellent in *Vrana* and *Shopa Harana*. 'Tannin' is the main chemical constituent characterized by astringent action on mucous membrane, thus exerts protective action and arrests bleeding. Providing warm *Kashaya* for sitz bath reduces pain and cleans the local area.

#### Action of *Gandhaka Rasayana Vati*

*Agnimandya* is the root cause for the causation of Disease *Arsha*. Strength of *Jataragni* is hampered due to many reasons like consumption of *Guru*, *Snigdha*, *Atidrava*, *Atimatra Ahara* or Excessive water intake, Cold, Stale food intake etc. due to improper digestion of food *ama* gets generated in the body.

In *Arsha* there is *Dushti* of *Rasa*, *Rakta* and *Mamsa Dhatu* as well as *Shaitilyata* of the anal Sphincter. When *Pitta* is involved there is a swelling and burning in the perianal area during defecation. *Gandhaka Rasayana Vati* does the purification of *Rakta Dhatu* along with its *Agnidipana* and *Amapachana* activity. It does *Pachana* of *Dushta Sama Kapha* and helps to reduce its *Pichilla* nature. Helps to heal ulcers formed in the anal canal. *Nagakesara* present in it does *Raktapachana* and *Stambana* thus helps in treating bleeding. *Triphala* in it works as the best *Vranaropaka*. Most of the ingredients present in *Gandhaka Rasayana Vati* are having *Laghu* and *Ruksha Guna* which helps in reduce *Kleda* in *Vrana*.

#### CONCLUSION

The disease *Arsha* is non-debatable pathological entity described at length in all the Ayurveda texts. Even though there is no direct reference of classification as

*Bahya Arsha* and *Abhyantara Arsha*, logically the variety exists in the classics while explaining *Arsha* happening other parts of the body *Arsha* is a vast topic can be compared with Hemorrhoids of Modern Medical Science and *Bahya Arsha* with that Sentinel Pile of modern science. *Agnikarma* procedure is very simple, non-invasive, result oriented, cost effective, OPD based and can be employed in majority of the diseases which are *Vata-Kapha* predominant. It has *Chedana* effect and instant pain relief potential. *Agnikarma* in the management of *Bahya Arsha* is one of the good ambulatory type of treatment in area of Par surgery (*Anushalya's*)

In the present study one group of patients were treated with *Panchaloha Shalaka*. The *Panchaloha Shalaka* was used to perform *Bahya Arsha chedana*. To compare the efficacy of *Agnikarma* by *Panchaloha Shalaka*, A Modern device which can perform the similar type of *Chedana Karma* was needed, hence Electric Cautery was selected.

In the present study total 40 patients were selected, which is a satisfactory sample size in a short term Research work. All the patients tolerated the procedure well. *Gandhaka Rasayana Vati* used as Internal Medication and *Jatyadi Ghrita* and *Panchavalkala Avagaha Sweda* were used as External Medication. *Gandhaka Rasayana Vati* showed good results in improving the status of the *Agni*, *Amapachana*, *Raktastambana* and *Vruna Ropana*. *Jatyadi Ghrita* was proved as a best healer of *Dagdha Vruna*. Result showed there is no significant difference in both group statistically but there was a little difference got in percentage of relief. There was no significant complication reported during the course of study. Thus, from the present study it can be concluded that Conventional *Agnikarma* by *Panchaloha Shalaka* is better to Electric Cautery procedure.

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