

“A systematic review of recent advances of *Agnikarma* in the management of *haemorrhoid*”

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ABSTRACT

Haemorrhoid means an abnormal mass of dilated and engorged blood vessel in swollen tissue that occurs internally in the anal canal or externally around the anus. Haemorrhoid is an extremely common problem reported since thousands of years with a prevalence rate that is highest among all the anorectal disorders. Haemorrhoid resembles with *arsha* in *ayurveda*. The disease *arsha* (piles) is initiated with *agnimandya* (Improper digestion) due to improper food habits and lifestyles.

Agnikarma has been explained by *Sushruta* as one among the *Anushastras* having greater importance in the management of *arsha*. The purpose of this study is to explain the importance of *agnikarma* as parasurgical procedure in

non surgical management of *arsha*. Different *samhitas*, classical texts and modern texts are well scrutinized to study the recent advances of *agnikarma* in *arsha*. All the modern techniques of cauterizations are indirectly based on *agnikarma*.

In modern management different laser technique are used such as infrared coagulation, Bipolar cautery, direct current and radiofrequency ablation therapy and BEIM technology. *Agnikarma* in the management of *arsha* is widely used with recent advances.

Sushruta is the pioneer of *Agnikarma*.

Keywords: *Agni Karma, Anushastras, Cautery.*

Introduction

Ayurveda science enhances the life style disorder in various *samhita*. Because of

drastic life style number of disorders are growing up so rapidly. Now a days proctological disease are very common amongst population in every class of society. *Arsha* i.e. piles or *haemorrhoid* is also common.

Haemorrhoids are progressively increasing in the society. It is manifested due to multifold factors viz. disturbed life style or daily routines, addiction, improper diet intake, prolonged standing or sitting, irregular disturbed habits of defaecation etc. which results in *Agnimandya* leading to vitiation of *Tridosha*, mainly *Vata Dosha*. These vitiated *Dosha* get localized in *Guda Vali* and *Pradhana Dhamani* which further vitiates *Twak*, *Mansa*, and *Meda Dhatu* due to *Annavaha shrotodushti* leads to development of *Arsha*.^[1]

Specially in the management of *Arsha* different techniques are well explained in different ways by *Sushruta* and other *Acharyas*. *Sushruta* explained mainly four types of management in *Arsha* i.e. . *Bheshaja*, *Kshar Karma*, *Agnikarma* and *Shastra Karma* according to chronicity.^[2]

One of them most important, *Agnikarma* is a Para-surgical procedure in which *Agni* is used for intentional burning for therapeutic purpose. It is indicated for various *vata kaphaj* disorders.

Agnikarma is a highly potential procedure than the *bheshaja shastra* and *kshara karma* because of its non recurrence nature. so

any complications and infection can be easily avoided.

Instruments

Instruments which are used for *agnikarma* as per classical literature including the following :

- ***Twak dagdha***: *pippali*, *godanta*, *shara*, *shalaka*, excreta of goat
- ***Mamsa dagdha***: *jamostha shalaka* and other metal *shalaka* like gold, silver, brass etc
- ***Sira snayu sandhi* and *asthi dagdha*** : warm honey, jaggery and *sneha dravya* ^[3]

Appropriate season for *agnikarma*: *Agni karma* can be done in all seasons except *greeshma* and *sharad*. In case of emergency it can be done in any season with special precautions.^[4]

Precautions taken during *agnikarma*:

In case of certain diseases like *ashmari* *bhagandara* *arsha* and *mukharoga* *agnikarma* should be done in empty stomach.^[5]

Generally, *Agni karma* should not be done in empty stomach. It is better to take *picchila anna* before *agni karma*.

Classification of *agni karma* : According to some *Acharya* *agnikarma* is of two types *twak dagdha* & *mamsa dadgha*. But according to *dhanwantari sampradaya* *sira snayu sandhi* and *Asthi* are also involved in *dagdha* ^[6]

□ **Twak dagdha lakshanas:**

production of sound, foul smell, *twak sankocha* (contraction of skin at the site of *dagdha*)

□ **Mamsa dagdha lakshanas :**

kapota varnata (change in colour) *alpa swayathu* & *vedana* (little swelling & pain), *suska sankuchita vranata* (wound formed during *dagdha* is dry & of small circumference)

□ **Sira Snayu dagdha :**

black colour (*krushnata*), *unnata vranata*, *srava sannirodha*

□ **Asthi sandhi dagdha:**

ruksha, *arunata*, *karkasha* & *sthira*

Indication of agnikarma :

Arsha is ideally indicated for agnikarma by Sushruta. Other indications are *sira roga*, *netra roga* Diseases of *twacha mamasa*, *sira snayu*, *sandhi* & *asthi* with severe pain due to vitiation of *vata*. *bhagandara*, *arbuda*, *apachi*, *sleepada*, *charmakeela*, *tila kalaka*, *antravidhi*, joint diseases, bleeding vessels and sinuses are treated with *agni karma*^[7]

Different shapes of agni karma :

Agni karma should be performed in four different shapes.^[8]

Valaya: round shaped

Vindu: dot like

Vilekha : linear cauterization

Pratisarana: irregular cauterization

According to *Vagbhatta* three more types of cauterization are performed

- *Ardha Chandra*
- *Swastika*
- *Astapada*

Contra indication of Agni karma^[9]

- ❖ *Pitta prakriti* individuals
- ❖ *Antah shonita* : Internal bleeding in *arsha*
- ❖ *Bhinna kostha* : Ruptured viscera
- ❖ *Nudhrita shalya* : in presence of foreign body
- ❖ *Durbala*: emaciated
- ❖ *Baala* : children
- ❖ *Vridha* : Old age
- ❖ *Bheeru* : patients with cowardice, mindset
- ❖ *Aneka vrana peedita*: affected with many infected wounds

AIMS AND OBJECTIVES

- ❖ To emphasis on the importance of *Agnikarma* in *Arsha* with recent techniques.
- ❖ To review the literature of *Agnikarma* in *Arsha* from *Ayurvedic* texts.

Classification of Arsha (Piles)^[10]

1. On the basis of the origin:

1. *Sahaja* (Hereditary)
2. *Janmottarakalaja* (Acquired)

2. On the basis of the character of bleeding:

1. *Ardra (Sravi)*- Bleeding piles due to vitiation of *Rakta* and *Pitta Dosha*.

2. *Shushka*- Non bleeding piles due to vitiation of *Vata* and *Kapha Dosha*.

3. On the basis of site :

1. *Bahya (samvarani)*
2. *Abhyantara (visarjini, pravahani)*

4. On the basis of prognosis:

1. *Sadhya* (Curable),
2. *Yapya* (Palliative)
3. *Asadhya* (Incurable)

Classification according to **anatomical position**^[11]

1. **Internal haemorrhoid:** It originates above pectinate line and covered with mucous membrane
2. **External haemorrhoid:** It originates below pectinate line and covered with skin.
3. **Interno-external haemorrhoids:** involving both mucous membrane and skin.

The above **two variety** may co exist simultaneously.

4. **Primary haemorrhoids:** The three classical position of the *haemorrhoids* are **3, 7, 11 O'clock**. They are called as left lateral, right anterior and right posterior respectively.
5. They are due to the main branches of superior rectal arteries i.e. left and right branches. Left branch containing as a single vessel, while the right

branch splits into anterior and posterior haemorrhoids.

6. Secondary haemorrhoids

Additional *haemorrhoids* may be present between these main *haemorrhoids* at the position of **2, 5, 9 and 12'o clock** position.

The classification according to the Prolapse:

- **1st degree haemorrhoids** are those which bleed but do not prolapse outside the anal canal.
- **2nd degree haemorrhoids** are those which prolapsed outside the anal canal during defecation and reduce spontaneously itself.
- **3rd degree haemorrhoids** are those which prolapsed outside the anal canal during defecation and goes back manually.
- **4th degree haemorrhoids** are those which permanently prolapsed outside the anal canal
- **Dagdha (burn) conditions**
- *Agni dagdha* (conditions) are categorized as per the magnitude of *dagdha*, such as
Plusta dagdha
- *Durdagdha*
- *Samyak dagdha*
- *Ati dagdha*, When *Agni karma* is performed for therapeutic purpose

then the *Dagdha* must be *Samyak dagdha*.

- In *samyak dagdha* for local application *vamshalochan*, *plaksha*, *lal chandan*, *sona geru* and *giloy* should be applied with ghee and treatment should be given like *pitta vidradhi*.^[12]

Remaining *dagdha* features and its treatment well explained by Sushruta .

After *Agnikarma* patients usually suffer from severe pain, burning sensations, appearance of large vesicles because of *kupita agni* vitiated *rakta* and because of same composition of *pitta* it also vitiates and produces features described above.

Acharya Shusruta has described *agni karma* in different surgical diseases in various chapters, in the management of wound under *shasti upakrama* he has included *agnikarma*.

Possible mechanism of action of *Agnikarma* in *arsha*^[13]

Agni karma cures all *vataj* and *kaphaja* disorders as *ushna guna* of *agni* is opposite to that of *vata* and *kapha dosha*. According to *Ayurveda* every *dhatu* has its own *dhatwagni* and when it becomes low diseases manifest.

In this condition *agni karma* works by local thermal therapy which may increase

tissue metabolism and leads to excretion of unwanted metabolites and toxins from the tissue i.e. piles and finally infected lesion is burned out.

Heat may stimulate lateral *spino-thalamic* tract which leads to stimulation of descending pain inhibitory fibers which release endogenous opioid peptides.

These peptides binds with *opioid* receptors at *substantia gelatinosa rolandi* which inhibits release of substance P (pre synaptic inhibition) and blockage of transmission of pain sensation.

Modern day procedures based on *Agnikarma*

Cauterization

Cautery is a medical practice or technique of burning a part of a body to remove or close off a part of it. It destroys some tissue in an attempt to mitigate bleeding and damage, remove an undesired growth, or minimize other potential medical harm, such as infections when antibiotics are unavailable.^[14] The practice was once widespread for treatment of haemorrhoids.

- ☐ To stop severe blood-loss
- ☐ *Cautery* was historically believed to prevent infection, but current research shows that *cautery* actually increases the risk for infection by causing more tissue damage and providing a more hospitable environment for bacterial growth.

Actual cautery refers to the metal device, generally heated to a dull red glow, that a physician applies to produce blisters, to stop bleeding of a blood vessel, and for other similar purposes.

The main forms of cauterization used today in the first world are electro-*cautery* and chemical *cautery*.

Cauterization was used to stop heavy bleeding, especially in case of bleeding pile mass. Cauterization was a common treatment in the Middle Ages, sometimes unintentionally as with Saint Hubert's Key. Cautery is described in the Hippocratic Corpus.^[15] The cautery was employed for almost every possible purpose in ancient times: as a counter-irritant, as a haemostatic, as a bloodless knife, as a means of destroying *tumours* etc.²⁰ Later, special medical instruments called *cautery* were used to cauterize arteries.

Electrocauterization

Electrocautery also known as thermal *cautery* refers to a process in which a direct or alternating current is passed through a resistant metal wire electrode, generating heat. The heated electrode is then applied to living tissue to achieve *haemostasis* or varying degrees of tissue destruction.

The process of destroying tissue (or cutting through soft tissue) using heat conduction from a metal probe heated by

electric current. The procedure stops bleeding from small vessels (larger vessels being ligated). Electro-*cautery* applies high frequency alternating current by a *unipolar* or bipolar method. It can be a continuous waveform to cut tissue, or intermittent to coagulate tissue^[16]

BEIM

BEIM tissue fusion sensing technology, uses the body's own collagen and *elastin* to create a permanent fusion zone. This technology can fuse vessel and monitor changes in tissue impedance and provides a real time adjustment control of the energy output, creating faster fusion cycles, more flexible fusion zone. Its introduction to the market in 1998, BEIM technology has set the industry standard for vessel sealing as used in more than 4 million procedures worldwide.

BEIM technology is using 'Biological Impedance Electrical auto-measurement', is a smart concept that is able to produce controlled tissue fusion without carbonation. This technology is being rapidly developed into a variety of modern surgery. BEIM pincers can intelligently auto-measure the impedance of *haemorrhoids* tissue and then act as sealing machines to seal the base of the haemorrhoids.

The major advantage of this technology is no bleeding, no open wound, no risk of infections and less pain as the nerve fibres are sealed in the tissue fusion^[17]

RESULT:

As above literature gives the detail information of *agnikarma* in management of different disorders, then we came to know its importance and mechanism of action, specially in case of *anorectal* diseases *agnikarma* plays vital role in *arsha*. Nowadays, different methods are well developed in the management of *arsha* such as cautery, laser etc. but Acharya Sushruta already explained its mechanism of action and way of application in *arsha*.

DISCUSSION:

Every type of technique has its own different mechanism of action such as in case of *electrocautery* only tissue fusion with the help of heated electrode and in *BEIM* technology one important mechanism of real time adjustable control of energy output. Different techniques of *agnikarma* which are very useful in variety of conditions specially in *anorectal* disorders well explained. In *arsha* *sushruta* enhances the importance of *agnikarma*.

Reviewing above all literature data we came to know that the basic *siddhanta* of *agnikarma* stated by *sushruta* over years

ago. On the basis of that *siddhanta* new variety of modalities are rapidly developed but the mechanism of action totally resembles the *agnikarma*.

CONCLUSION:

In the management of *arsha* different *acharya* stated different ways of management as we emphasize on *agnikarma* rather than other medical or therapeutic way of treatment due to its specialty of non recurrence so *Sushruta* is the main pioneer of *agnikarma* regards *arsha*.

Now a day's number of methodology are available in the market such as laser technique, electro *cautery* etc. But, the basic phenomenon of *Sushruta* still now present in multiple faces of modern techniques. Above context helps us to evaluate that till now *agnikarma* plays vital role in the management of *arsha* (*haemorrhoids*).

SOME RELATED FIGURES:



Figure 1



Figure 2



Figure 3

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