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## Review Article

### APPLIED APPROACH OF AGNIKARMA THERAPY

Chaturvedi Sonal<sup>1\*</sup>, Katara Pankaj<sup>2</sup><sup>1</sup>Medical Officer (Shalya Tantra) Ch. Brahm Prakash Ayurved Charak Sansthan Khera Dabar New Delhi, India<sup>2</sup>Assistant Professor, Panchkarmaka Department, Ch. Brahm Prakash Ayurved Charak Sansthan Khera Dabar Government of NCT Delhi, India

*Correspondence	ABSTRACT
<p>Dr. Chaturvedi Sonal Medical Officer (Shalya Tantra) Ch. Brahm Prakash Ayurved Charak Sansthan Khera Dabar New Delhi, India</p> <p><b>DOI: 10.7897/2321-6328.02125</b></p> <p>Article Received on: 15/01/14 Accepted on: 18/02/14</p>	<p>Sushruta known as father of surgery has described various surgical procedures along with some para-surgical measures. 'Agni karma' is one amongst these parasurgical procedures. In Agnikarma, therapeutic burning is performed with special red hot metal probe on specific sites. Agnikarma has been given special place in surgery by Sushruta and it is believed that disease treated by Agnikarma never reoccurs<sup>1</sup>. It is one of the treatment modality used in certain parts of the world. In modern time also it is used and it is termed as therapeutic burns or cauterization. This paper deals with details of various aspects of Agnikarma and its use in present context. Sushruta Samhita and its commentaries are the main source of this review article.</p> <p><b>Keywords:</b> Parasurgical Measures, Agnikarma, Dagdha.</p>

### INTRODUCTION

Agnikarma is therapeutic burning with special tools on specific sites. Agnikarma has been given special place in surgery by Sushruta and it is believed that disease treated by Agnikarma never reoccurs<sup>1</sup>. It is one of the treatment modality used in certain parts of the world. In modern time also it is used and it is termed as therapeutic burns or cauterization. This paper deals with details of various aspects of Agnikarma and its use in present context. In Sushruta Samhita Acharya Sushruta mentioned Agni karma as a parasurgical procedure and it is superior to all parasurgical procedure because it cured all diseases those are not cured by Shastra, Kshara, and Jalauka<sup>2</sup>.

### Classification of Agnikarma

Agni karma is classified in Ayurvedic text

- According to Dravya used (Snigdha and Rukksha)<sup>3</sup>
- According to the site (Local and Systemic)
- According to the disease (in Arsha, kadam-Agnikarma done after excision, and in Bhangandar, Nadivrana it should done after incision)
- According to the Aakriti (Valaya, Bindu, Vilekha, Pratisaran, Ardachandra, Swastika, Astapada)<sup>4</sup>
- According to the Dahtu which will be cauterized (Twak, Mamsa, Sira, Snayu, Asthi Sandhi)<sup>5</sup>

### Time of Agni karma

All seasons except Grishma and Sharada. In emergency it can be done any time<sup>6</sup>.

### Dahan Upkrama

They are the instrument to produce therapeutic burns [samyak Dagdha] during Agnikarma chikitsa. They are as follows;

- Twak Dhatu Gata Rog- Pipli, Ajasakrit, Shara, Shalaka, Godanta.
- Mansa Dhatu Gata Rog- Jambostha, other Loha.
- Sira Snayu Asthi Sandhi Gata Rog- Madhu, Guda, Sneha<sup>7</sup>.

Heating Shalaka (probe) is made by different metals. Depending on the diseases, different materials heated at different temperatures are used for Agni Karma. In case of Agni karma on skin, low heated Shalaka should be used as compared to diseases of muscular origin where high heated Shalakas are used. In catabolic or degenerative diseases gold or silver probe should be used, similarly in anabolic and hyper growth conditions Pancha Dhatu or iron probe should be used. The intensity of temperature generated on heating (red hot) can be different by the different metals.

### Indications of Angikarma

- All types of pain and Vataj and kaphaj disease like Sandhivata (osteoarthritis), cervical spondylolysis, Chronic muscular pain, pain due to ligament and tendentious injury, stiffness of joints, osteoarthritis, frozen shoulder, calcaneal spur, warts, mole, sciatica, tennis elbow, golfers elbow.
- After excision or Chedankarma of cyst, mass, wards, tumor, piles, fistula etc.
- Migraine, trachoma, sinusitis and other type of shiroroga.
- Shalyopaharia Adhyaya as a Shalyaniraharaha, vaat Vyadhi, Arsha, Ashmari, Bhagandar, Kustha, Granthi, Apachi, Arbuda, Vridhi, Updamsa, Kshudra roga<sup>8</sup>.

### Contra Indications

Pitta Prakruti, Child, Old, Pregnant Women, Anemia, perforated abdomen, person who have contraindicated for Swedana therapy<sup>9</sup>,

### Method of agni karma

The whole Agnikarma procedure can be divided into 3 parts:

1. Purva Karma (pre-operative procedure)
2. Pradhana Karma (operative Procedure)
3. Paschata Karma (Past operative care)

### Purva Karma

The Agnikarma theatre should be well prepared with all essential materials as follow:-

- Trifala Kwath - for Prakkshalana of local part, Yastimadhu powder- [for after burnt dusting, Pulp of Ghritkumari- [for immediate cooling effect after burnt), Swab-holding forceps, Plota (gauze piece), Pichu (cotton), Flame source, Panchdhatu shalaka, Oil, Honey etc.
- Patient should be advised for Snigdha and Pichhila light diet before Agnikarma therapy<sup>10</sup>.
- Informed consent of patient should be taken.
- Routine blood investigations like CBC, Blood Sugar etc to be done. Injection Tetanus Toxoid to be given.
- The Shalaka should be heated till red hot.
- Confirmation of site of Agni Karma and marked (Maximum tenderness)
- Patient asked to sit facing East side
- Doctor who goes to perform Agnikarma should wear sterile face mask, cap, gown and gloves.
- Patient should be taken in confidence and ask him/her to lying on bed of Agnikarma theatre and the disease part should splash with Trifala Kwath and draped with sterile drape sheet.
- Use of spirit is contraindicated due to its heat sensitive properties.

### Pradhana karma

The affected site is chosen and Samyak Dagdha Vrana should be produced in the form of Vilekha/Bindu<sup>8</sup> etc by Panchdhatu Shalaka (made by copper 40 %, Iron 30 %, Zinc 10 %, Silver 10 % and Tin 10%). The proper space should be maintained between two Samyak Dagdha Vrana.

### Paschat karma

- After producing Samyak Dagdha Vrana, Honey + Cow Ghrita<sup>11</sup> with swab holding forceps should be applied on Samyak Dagdha Vrana. It has used to get instant relief in pain and burning sensations.
- After wiping of Kumari Patra, Avchuran (dusting) of Yastimadhu powder should be made on Samyak Dagdha Vrana.
- Patient should be advice for local application of mixture of Haridra powder and coconut oil on the Samyak Dagdha Vrana from very next day up to Dagdha Vrana to be healed.
- Do not touch water to Dagdha vrana for 24 hour. Complete Ropana (healing) on the Vrana should be observed. Pathya-Pathya should be used.
- Inspection of defective Agnikarma and management of these Asamyang Dhagdha.

### These Asamyak Dagdha are as follow

According to Sushruta, all Dagdha are included under four types of Dagdha Vrana<sup>12</sup>.

### Plushta Dagdha

If the Shalaka is not properly heated, this type of Dagdha has occurred. In Plushta (burn of 1<sup>st</sup> degree) warming the body and administration of drugs of Ushna Virya (hot potency) should be given. When the temperature of body become increased, the blood become liquefied; water by nature is cold in potency and so makes the blood thick (coagulate) hence heat only gives comfort.

### Dur Dagdha

When the surgeons have unskilled hand or patient is shaking his body part due to fear of burn then Dur Dagdha may occur. In dur Dagdha (burn of second degree) the surgeon should resort to both warm and cold therapies, applications of ghee, poultices and bathing the body should be done in cold state only.

### Samyaka Dagdha (This is therapeutic burn)

Acharya Sushruta mentioned Samyaka Lakshana produced in any type of dhatu and special symptoms are only related to the dhatu concerned.

### Samyaka Lakshana of Samyaka Dagdha Vrana

- Ana-Awagadha Vranata (wound which is not deep)
- Talphala Varnata (fruit of tala tree- black in color)
- Susamshita Vrana (without elevation or depression)

### Ati-Dagdha

This complication is produced due to more heat which is transferred from red hot Shalaka to disease part. In Ati Dagdha (burn of fourth degree) the torn (hanging and loose) muscles should be removed (by cutting) followed by cold therapies, then the doctor should apply the paste of broken rice, bark of Tinduki mixed with ghee or cover the wound with leaves of guduchi or aquatic plant (like lotus etc) all the treatment similar to that of visarpa of pitta origin should be done. Madhuchhithadi Ghrita<sup>13</sup> contains Madhucchistha [wax], Madhuka Lodhra, Mahajioshta, chandana and Murva should be macerated together and then cooked with ghrith is best for healing of wound in all kind s of burns. In other word, we can say Plusta is scorched burn, Dur Dagdha is blistered burn, Samyak Dagdha is superficial burn and Ati Dagdha is burn which is excess burned.

### Agnikarma Shresthsta (Importance of Agnikarma)

Agni (fire) is better than alkali in action of burning. It is said so because disease treated by burning will not reoccur again and also because those disease which are incurable by the use of medicine, Shastra Kshara will be cured by Agni karma<sup>1</sup>. The surgical excision should be done with the short instrument which is heated by Agni with benefit old asepis; otherwise there will be sepsis by unsterile instrument. By these virtues Agnikarma is superior procedure than the other procedure<sup>14</sup>.

### DISCUSSION

Agnikarma was very well known tool for treating many diseases for the Ayurveda ancestors. With the evolution of time Agnikarma therapy rectified and improved by

introduction of cauterization. This procedure can be following effects.

### Probable mechanism of Agni Karma

Ayurveda believes that being Ushna treatment is acts against the qualities of Vata and Kapha Dosha. Hence Agnikarma cures all the Vataja and Kaphaj disorder. Pain cause any where is the body is due to Vata, Agni karma being Ushna Chikitsa pacifies Vata, thus the pain is relieved immediately after Agnikarma. Similarly Kaphaj disorders also get cured by the Ushna Guna (hot qualities) of Agnikarma. According to Ayurveda, every Dhatu (tissue) have its own dhatvagni (tissue fire) which is responsible for the nourishment, increase and decrease of Dhatu. When this Dhatvagni or tissue fire becomes low (Manda), diseases begins to manifest. Thus in this condition, agni karma works by giving external heat there by increasing the dhatu Agni (tissue fire) which helps to digest the aggravated Doshas and hence cures the disease<sup>15</sup>.

### Effects

#### On Metabolism

According to scientist Dr. Ven Hanff, the place where heat burns the local tissue metabolism is improved, thus various metabolic and rejuvenating changes takes places at the site of heat burns and thus it leads to increased demand of oxygen and nutrient of the tissues at the site of heat burn. It also excretes the unwanted metabolites and toxins.

#### Effect on the blood circulation

After performing Dahana the superficial sensory nerves gets stimulated which leads to dilatation of local blood vessels, resulting in increased blood circulation. Apart from this it also decreases the viscosity of blood and thus leads to decreased blood pressure.

#### Effect on pain

Heat may stimulate lateral Spino-Thelamic tract which leads to stimulate of descending pain inhibitory fiber which release of endogenous opoid peptide which bind with opoid receptor at substantia gelatinosa rotandi which inhibit of release of substance (pre synaptic inhibition) and blocked of transmission pain sensation occur.

#### Effect of heat on general rise temperature

There may be generalizing dilatation of the heated blood on the centers concerned with regeneration of the body temperature. Heating affect the vasomotor centers causing general rise in temperature

#### Effect of heat on Muscles Tissues

Rise in temperature induces relaxation of muscles and increase the efficacy of their action. The muscle fibers contract and relax more quickly although the strength of the contraction and it's not affection and relaxation of the antagonist permits a freer action of the prime movers. However excessive heating causes coagulation and destruction of the tissues, heat helping to achieves muscles relaxation and for the relief of muscles spasm with inflammation. The relief in pain makes it possible to walk or activity of extremities efficiently

### Effect of heat in Bacterial Infection

Inflammation is the normal response of the tissue to the presence of bacteria, the principles features being vasodilatation, exudation of fluid into the tissue and increases in the white blood corpuscles and antibodies in the area. The response obtained on heating the tissues augment these changes and so reinforce the body normal mechanism for dealing with the infecting organism

### Effects on sweat gland

Increase the activity of sweat gland<sup>16</sup>

### CONCLUSION

Agnikarma therapy and its applied aspect are described in Ayurvedic text much before since its utility was discovered by Ayurveda Acharyas and surgeons. The procedure and its applied aspect are still same as ancestors.

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