



CRITICAL APPRAISAL OF AGNIKARMA AND ITS THERAPEUTIC ASPECTS

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ABSTRACT

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 with special tools are done on specific sites. Agnikarma has been given special place in surgery by Sushruta and it is believed that disease treated by Agnikarma never reoccurs. 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 paper.

Keywords: Agnikarma, cauterization, dagdha, parasurgical measures

INTRODUCTION

Shalya Chikitsa or surgery is among eight branches of Ayurveda. This branch otherwise known as Dhanwantariya Sampradaya and one of the two main schools of Ayurveda, was founded by Divodasa Dhanwantari. It was later developed by his student the great Maharishi Sushruta. Sushruta has mentioned different methods of management of diseases, such as Bleshaja karma, Kshara Karma, Agni karma, Shastrakarma and Raktamokshana. Acharya in medical science Agni karma means application of Agni directly or indirectly with the help of different materials to relieve the patient from disease. Dalhana, commentator of Sushruta Agni karma is classified as Agni krita karma or the karma or action carried out by Agni. Sushruta indicated 'Agni karma' in various disorders of skin, muscles, vessels, ligaments joints and bones. He has also explained that the diseases treated with Agni karma modality don't reoccur. The approach of Agni karma has been mentioned in the context of diseases like Arsha, Arbuda, Bhagandar, Sira, Snayu, Asthi, Sandhigata Vata Vikaras and Gridhrasi.¹ In Agnikarma therapy part or tissue is burned with the help of various special materials. It can be correlated with modern therapeutic cauterization.

During Vedic period also use of agni for therapeutic purpose was known. In Rig veda application of Agni is indicated for the remedy of different gynaecological and obstetrical diseases. According to the verses of Rigveda the Agni is capable of destroying the invading parasites and demons in the vagina and uterus of the women and to save the fetus from the latter. Yajur veda has also emphasized the use of Agni as therapy for sheeta. It is indicated that use of Agni in case of sheeta and sheeta induced disease. Samaveda bears elaborated description about Agni which is clear by enumeration of a separate chapter as 'Agnaneya kanda'.

In this veda Agni is given special names as Parmeshwar, Aatma, Vaishwanar etc. It is considered as the life existing in the creatures of the universe and which spreads/ propagates all over the area is called Agni. Atharva veda has identified Agni as God and treatment for diseases from the verses it

becomes clear that Agni was used to protect the body from the invading microorganisms.

Now a days also the sterilization by heating process can be interpreted as the above idea of Atharva veda. The cauterization of skin of effected area is also done to remove the infections and it is an effective treatment. All these methods of utilization of Agni as therapeutic measures helping in medical practice is nothing but the ancient idea. It is also mentioned in Atharva veda as 'Rakshoha agni'.

Classification of Agni karma

Though there is no clear cut description about the classification of Agni karma in Ayurvedic literature, still with the consideration of its type of applications, to have a clear concept following classifications have been done.

According to Dravyas used²

- Snigdha Agnikarma: performed by means of madhu, grith, tailam used for Agni karma to treat diseases situated in Sira, Snayu, Sandhi, Asthi.
- Ruksha Agnikarma: performed by means of pippali, shara, shalaka, godanta used for Agni karma to treat diseases situated in Twak and Mamsa dhatu.

According to site

- Sthanika (local)- As in vicharchika, kadara, arsha.
- Sthanantariya (Distal to site of disease)-As in visuchika, apachi, gridhrasi etc.

According to Akriti³

- **Valaya** - Circular shape.
- **Bindu** - Dot like shape. According to Acharya Dalhana shalaka should be of pointed tip.
- **Vilekha** - Making of different shapes by heated shalaka. Vilekha type of agni karma is further subdivided by Acharya Dalhana into three types according to the direction of line- Tiryak (Oblique), Riju (Straight), Vakra (Zigzag)
- **Pratisarana** - Rubbing at indicated site by heated shalaka and there is no specific shape.

- **Ardhachandra**⁴ - Crescent shape.
- **Swastika**- Specific shape of Swastika Yantra.
- **Ashtapada** - Specific shape containing eight limbs in different directions.

According to Dhatus⁵

- Twak dagdha
- Mamsa dagdha
- Sira snayu dagdha
- Sandhi asthi dagdha

Dahanupakarana⁶

Dahanupakarana are various accessories like drugs, articles and substance used to produce therapeutic burns during Agni karma Chikitsa. They are classified as follows according to various Acharyas;

They could be classified as :

- Upakarana of plant origin: Pippali (Piper Longum), Yashtimadhu (Glycyrrhiza Glabra Linn.), Haridra (Curcuma longa), Guda (jaggery) Sneha Taila, Sarjarasa (herbal).
- Upakarana of animal origin : Ajashakrita, Godanta, Madhoochchhishta (animal-origin)
- Metallic and other upakarans : Panchadhatu shalaka is made up of Tamra (copper) 40%, Loha (iron) - 30%, Yasada (zinc) - 10%, Rajat (silver) - 10%, Vanga (tin)- 10%

Use of these materials has been told according to the site of use. For superficial diseases involving skin Pippali, Ajashakrita, Godanta, Shara, Shalaka should be used. For diseases involving muscle Jambavaushtha, Panchadhaatu Shalaka Kshaudra should be used. For diseases of Sira, Snaayu, Sandhi, Marma diseases Madhu (Kshaudra), Guda (Jaggery), Sneha should be used.

Indications

A number of diseases and conditions have been explained in texts where agnikarma is indicated as therapeutic measure. Around 50 diseases have been mentioned where agnikarma can be performed. Few are Apachi, Granthi, Arbuda, Antravidhi, Shlipada, Nadvrana, Upadamsa, Gulma, Shiroroga, Vataj shiroroga, Kaphaj shiroroga etc.

Pre-operative Measures - Before going for agnikarma paper assessment should be made. Instruments required for agnikarma like pippali, shalaka and ploti, pichu, grita, madu, source of Agni should be kept ready. Patient should be empty stomach in cases like obstructed labour, urolithiasis, fistula, in different abdominal diseases, piles and diseases of oral cavity. Pichhila anna should be given before the procedure in all the other conditions.

Operative - Before performing Agnikarma chanting of mantras should be done. Minutely examine the site where agnikarma has to be performed. Proper cleaning of the area should be done. Agnikarma is performed at the site until samyak dagdha lakshana appears.

Post Operative Measures - Gritha and madhu should be applied over the wound for proper healing. After agnikarma proper diet should be taken.

Contra Indication for agnikarma

Agnikarma should not be done in following conditions-

- Unsuitable in PittaPrakriti, Sharada and Grishma ritu, in children, in aged person.
- Unsuitable in persons who are lean and thin, coward etc.
- It is contraindicated in pregnancy, internal bleeding, bleeding disorders, perforation, retained foreign body, etc.

Features of proper agnikarma⁷

Twak dagdha- Production of crackling sound, bad odour and contraction of skin are signs of proper agnikarma.

Mamsa dagdha - Color like that of pigeon i.e. ashy, dark grey, mild swelling, mild pain, dry contracted wound are the signs of proper mamsa dagdha.

Sira snayu dagdha - Black colourations, elevation of site, stoppage of discharge are signs of proper sira snayu dagdha.

Sandhi asthi dagdha - Dryness, dark red coloration, roughness and stability of part are the signs and symptoms of Sandhi asthi dagdha.

Agni karma kala⁸

According to Acharya Sushruta, Agni karma can be done in all seasons, except Sharad ritu (autumn) and Grishma ritu (summer). It is because in Sharad season there is a Prakopa of pitta and Agni karma also aggravates Pitta which may lead to Pitta prakopa, leading to production of various disorders due to vitiated Pitta. Agnikarma is contraindicated in Grishma ritu as it is the hot season which will again cause Pitta aggravation. But in emergency, Agni karma can be done in any seasons.

Importance of Agni karma⁹

Acharya Sushrut and Acharya Vagbhatta have both given superior place to Agnikarma as compared to Ksharakarma among Dahana kriyas used for treatment of various diseases as in cases treated with Agnikarma, chances of recurrence are not present. It is supposed to have effect of sterilization. It causes coagulation and closure of bleeding vessels and thus helps in haemostasis. Agnikarma eradicates disease from its root and so considered to be superior. It shows shamaka effects on both Vata and Kapha doshas.

Possible mechanism of action

Agnikarma cures all the Vataja and Kaphaj disorders as Ushna guna of Agnikarma is opposite to that of Vata and Kapha doshas. According to Ayurveda, every Dhatu (tissue) have its own Dhatvagni and when it becomes low, diseases begins to manifest. In this condition, Agnikarma works by giving external heat there by increasing the Dhatvagni which helps to digest the aggravated doshas and hence cures the disease¹⁰. The local thermo therapy may increase tissue metabolism which may leads to excretion of the unwanted metabolites and toxins. Heat may stimulate lateral spinothalamic tract (SST) which leads stimulation of descending pain inhibitory fibres (DPI) which release of endogenous Opioid peptide which bind with opioid receptors at substantia gelatinosa rolandi which inhibit of release of P-substance (Pre-synaptic inhibition) and blockade of transmission pain sensation occur.

DISCUSSION

The use of cautery dates back as far as prehistoric times, when heated stones were used to obtain hemostasis. In Ayurveda, treatment by heating of tissue was well known tool as early as the 1500-1000 years BC. With the advancement of science techniques of Agnikarma improved by introduction of electricity. The use of electricity in

medicine began in the 18th century.¹¹ Around the turn of the 19th century, medical uses for electricity began to be realized. Franz Nagelschmidt, in 1897, discovered that patients with articular and circulatory ailments benefited from the application of electrical currents. He coined the term diathermy to describe the heating effect discovered by d'Arsonval 6 years earlier.¹²

The main forms of cauterization used today are electrocautery and chemical cautery. Electro cautery - Electrosurgery has been described as high-frequency electrical current passed through tissue to create a desired clinical effect.¹³ Electrosurgical technology offers essentially two types of devices for energy delivery: monopolar and bipolar. The monopolar instrument, the Bovie being the most common example, delivers current through an active electrode, which then travels through the patient and back to the generator through a conductive adhesive grounding pad applied to the patient before beginning the procedure. Bipolar instruments resemble surgical forceps, with both the active electrode and the return electrode functions being performed at the surgical site. The electrosurgical energy does not travel through the patient but is confined to the tissue between the forceps. Because of this configuration, bipolar delivery of energy clearly offers very little chance for unintended dispersal of current.

Another form of cauterization is chemical cautery- Many chemical reactions can destroy tissue and some are used routinely in medicine, most commonly for the removal of small skin lesions (i.e. warts or necrotized tissue) or haemostasis. The disadvantages are that chemicals can leach into areas where cauterization was not intended. For this reason, laser and electrical methods are preferable, where practical. Some cauterizing agents are-silver nitrate, trichloroacetic acid, cantharidin etc.

Many works are going to prove usefulness of cauterization in various diseases. Recent work have done in low back, referred leg pain, cutaneous leishmaniasis, skin warts, epistaxis, psychiatric illness etc. Study states that intradiscal electrothermal heating treatment is a minimally invasive procedure used to treat patients with low back and referred leg pain¹⁴. There has been much written about the proposed mechanism of action of IDET. Proposed mechanisms include alteration of spinal segment mechanics via collagen modification, coagulation of annular nociceptors leading to contraction of collagen¹⁵, biochemical mediation of inflammation¹⁶, decreased intradiscal pressure and cauterization of vascular in growth. None of these proposed mechanisms has been proven. In addition, the original concept that annular heating would cause beneficial collagen modification remains unproven, and animal studies suggest that instead there may be a decrease in motion stability¹⁷.

In another study thermotherapy has been proved as first line treatment for cutaneous leishmaniasis. The thermotherapy is also a valid alternative in patients with renal, hepatic and cardiac illness who cannot receive systemic therapy. It is important to mention that thermotherapy should not be applied near mucosal areas.¹⁸ Nasal antiseptic ointment and silver nitrate cauterization were found to have similar outcomes in the treatment of recurrent epistaxis¹⁹. Many researches are still going on to prove efficacy of Agnikarma in treatment of different diseases.

CONCLUSION

Agnikarma and its uses are described in Ayurveda much earlier than it's utility was discovered by surgeons of rest medicine branches. The technique and equipments have become advance but the basic principles are still the same.

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