ROLE OF AGNIKARMA IN PAIN MANAGEMENT: AN OVERVIEW

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ABSTRACT

Ayurveda is traditional ancient Indian system of health science. Agnikarma is a widely used clinical practice described as a para surgical procedure in Ayurveda. Agnikarma means procedure done by Agni to treat the disease. According to Acharya Sushruta, “the procedure in which Samyaka Dagdha Vrana is produced by Agni is called Agnikarma.” In Sushruta Samhita, different Dahanopkarnas are mentioned for Agnikarma such as Pippali, Aja shakrita, Shalaka, Kshaudra and Sneha. Pain is the cardinal feature of most musculoskeletal disorders which affects the quality of life. In Ayurveda, the word pain can be correlated with Ruja, which is caused due to vitiation of vata. For instant pain relief in musculoskeletal disorders patients usually take NSAIDs but it has some side effects on the body. Agnikarma is a better alternative, having vata-kaphahara properties like Ushna, Sukshma and Ashukari Guna so it has been chosen to manage vata disorder. It is also helpful in increasing Rasa Rakta Samvahana to affected site. The excess blood circulation to the affected part flushes away the pain producing substances and patient gets relief from symptoms and therapeutic heat increases the Dhatwagni, so metabolism of Dhatu become proper and digests the Amadosha from the affected site and promotes proper nutrition from purva Dhatu. In this way, Asthi and Majja dhatu become more stable resulting in relief from all painful conditions. Agnikarma is an important tool in pain management of many musculoskeletal disorders due to being a safe, easy, cost effective and OPD level procedure.
INTRODUCTION

Pain management has always been a critical aspect of healthcare, with various approaches and techniques being employed to alleviate discomfort and improve the quality of life for patients.[1]

Everyone experiences Vedana i.e., pain in their life at least once.[2] People feel pain when a signal transmits through nerve fibers to the brain for its interpretation.

Pain is the cardinal feature of most musculoskeletal disorders. It is defined as an unpleasant sensory and emotional experience, which is generally associated with actual or potential tissue damage.[3]

In Ayurveda the word pain can be correlated with ruja, which is caused due to vitiation of vata. In Sushrut Samhita, the word pain is described as shool. There are various treatment modalities in Ayurveda, which are mentioned by Acharyas, in Sushrut Samhita, it has mentioned that Agnikarma is a better treatment for pain. Agnikarma therapies having shula-prashman and disease modifying potential with a good safety profile, thus should be used in vatavyadhi involving sira, snayu, asthi, and sandhi structures.

Acharya Charak described Agnikarma as one of treatment in various vatavyadhi such as Gridhrasi. It is a procedure, in which heat is given to affected parts of body by various materials in controlled manner. According to Acharya Sushruta, if Agnikarma procedure is used in treatment of a disease, there will be less chances of their recurrence.

Some diseases which are incurable by drugs and surgery, Agnikarma therapy increases chances of curability. This review article aimed at analyzing the role of Agnikarma in pain management.

Definition

The word Agnikarma consists of Agni + Karma i.e., Heat + Procedure.[4] When Samyaka Dagdha Vrana produced by Agni with the help of various Dravyas called as Agnikarma.
Classification of agnikarma\textsuperscript{[5,6]} 

1. **According to akriti:**
   a) *Valaya dahan vishesh* - Circle. Commonly useful in Granthi, Arbuda and Shotha
   b) *Bindu dahan vishesh* – Dotted shape. Commonly useful in Gridhrasi, Vicharchika, Shilipada and Parshnishula
   c) *Vilekha dahan vishesh* – Parallel line. Commonly useful in katishula and Grivashula.
      
      Acharya Dalhana subdivided Vilekha further into three types -
      1. *Tiryak* – Oblique
      2. *Riju* – Straight
      3. *Vakra* – Zig zag

d) *Pratisarana* – Rubbing. Useful in kadara
   
   Acharya Vagbhatt added three more Akriti along with these four Akriti mentioned above - \textsuperscript{[7]}
   e) *Ardhachandraka* – Crescent shape useful in Antravrudhi
   f) *Swastika* – Four tailed mark
   g) *Ashtapada* – Eight tailed mark

2. **According to dravya:**\textsuperscript{[8]}
   a) *Snigdha Agnikarma*: Madhu, Ghrita, Taila etc. are used for Sira, Snayu, Sandhi and Asthi type of Agnikarma.
   b) *Ruksha Agnikarma*: Pippali, Shalaka, Godanta are used for Twaka and Mamsa related samprapti.

3. **According to site:**
   a) *Sthanika* (Local) - Visarpa, Nadivrana, Kadara, Arsha, Vicharchika etc.
   b) *Sthanantariya* (Distal to the site of disease) - Apachi, Gridhrasi, Pleehodar, Yakritodar etc.

4. **According to the diseases:**
   a) In Arsha, Kadar - Agnikarma Chikitsa should be done after Chhedan (surgical excision)
   b) In Bhagandara - Agnikarma should be done after Bhedan (incision)
   c) In Krimidanta - Agnikarma is indicated after extraction of tooth
5. According to dhatu:

According to Acharaya Sushruta and Vagbhata, the Agnikarma should be done as per involvement of the Dhatus such as-

a) Twak Dagdha
b) Mamsa Dagdha
c) Sira and Snayu Dagdha
d) Asthi and Sandhi Dagdha

Dahanupakarana

Acharya Sushruta mentioned various substances used to produce therapeutic burns during Agnikarma procedure known as Dahanupkarana.[9] These can be classified according to their origin which is as follows:

a. Plant origin - Pippali, Yashtimadhu, Haridra, Guda, Sneha taila, Sarjarasa.
b. Animal origin - Ajashakrita, Godanta, Madhuchchista.
c. Metallic and other Upkaranas - Panchdhatushalaka which is made up of Tamra (copper), Loha (iron), Yasada (zinc), Rajat (silver), Vanga (tin) having individual constitution as 40%, 30%, 10%, 10% and 10% respectively.

Acharya Vagbhatt also mentioned various Dahanaupkarana along with the diseases in which they can be used. Acharya Vagbhatt also added Pichuvarti, Suryakant, Madhuchchista as a Dahanaupkarana

Acharya Sushruta has indicated the materials by name according to the site of Agnikarma:

a. Twakadagdha - Pippali, Ajasakrida, Godanta, Shara, Shalaka.
b. Mamsadagdha – Jambhavsta Shalakla and Other Metals.
c. Sira, Snayu, Sandhi and Asthidagdha - Madhu, Jaggery and Sneha.

According to Acharya Vagbhata for Twakadah, Godanta and Suryakanta should be used. Madhu, Sneha, Jambavastha and Jaggery should be employed for Agnikarma of Arsha, Bhagandara, Granthi, Nadivrana etc.

Dhatugata samayaga dagdha lakshana

1. Twakadagdha Lakshan - Shabdapradurbhavo (production of sound), Durgandhta (bad odour), Twak sankocha (contraction of skin).
2. Mamsadagdha lakshana - Kapotvranata (colour like pigeon ashy-grey), Alpa Swayathu and Vedna (mild swelling and pain), Shushka Sankuchit Vranata (dry contracted wound).


4. Asthi - Sandhidagdha Lakshana - Arunata (dark red colouration), Rukshata (dryness), Karkashata (roughness), Sthirata (stability).

Season for agnikarma
Agnikarma can be performed during all seasons except Grishma and Sharada. Even in these two Seasons, in the case of an emergency, it may be performed after taking appropriate precautions.

Indications of agnikarma
Many diseases have been explained in the text where Agnikarma is indicated as a therapeutic measure. Few are Bhagandar, Charmakeel, Tilakalak, Granthi, Arbuda, Apachi Antarvridradhi, Shlipada, Nadivrana, etc. Also, if there is intense pain in Twak, Mamsa, Sira, Snayu, Sandhi, and Asthi, or there is continuous bleeding condition then Agnikarma should be performed.

Contraindications of agnikarma
Agnikarma is contraindicated in person of Pitta Prakriti, Bhinna Kostha, Durbalya, Vriddha, Antah Shonita, Anuddhrrata Shalya, Bala, Bhiru, person afflicted with many Vrana and a person who is forbidden for Swedana. Swedana is contraindicated for suffering from Pandu, Atisara, Guda Bhrams, Udara Roga, Nasta Sangya, Chhardi, Shonhita, person under influence of alcohol, Vidagdha Rakta Pitta, Sthula, Ajirna, Kruddha, Trishna, Adhya Rogi, Garbhini, Prameha, Ruksha, Daurbalya, Shranta, Visha, Kshudha, Timir, Kshata and Oja Kshaya. According to Charaka, Agnikarma should not be carried out in the Vrana of Snayu, Marm, Netra, Kushtha and Vrana with Visha and Shalya.

Method of agnikarma\[^{[10]}\]

Purva karma:
It includes proper assessment and preparation of patient and instruments required for procedure. Agnikarma shalaka, Prota, Pichu, Gas stove, cut towel, draw sheets, Triphalakshaya, Kumari swarasa, Yastimadhu churna, Swab holding forceps should be kept ready for use. Patients should be advised for snigdha and laghu diet before Agnikarma chikitsa. Written consent of the patient should be taken and lastly procedures explained to the
patient for his easy co-operation. Routine investigations should be performed. Affected area should be washed with triphalakashaya before doing Agnikarma. The shalaka should be heated to red hot on fire and give the required position at the disease-affected region. In most patients lying down position is essential.

**Pradhan karma:**
The affected area of the patient should be examined and as per disease condition with required dahan vishesha 05 to 30 samyakdagdha vrana should be made by Shalaka. The proper space between two samyak dagdha vrana should be kept. One should not exert excessive pressure while doing Agnikarma; otherwise, it might result in Atidagdha.

**Paschata karma:**
After making Samyak dagdha vrana, the kumari swarasa should be applied on Samyak dagdha vrana to get relief from burning sensation and after wiping of kumari swarasa dusting of yashtimadhu churna should be applied. Patient should be advised to apply local application of haridra powder with mix coconut oil on samyaka dagdha. Pathya-apathy should be advised to the patient. Complete healing of the vrana should be observed.

**Effects of agnikarma:**
It increases metabolism and blood circulation, stimulates nerves, relaxes muscles, decreases pain, infection, joint stiffness and inflammation.

**Mode of action:**
In Vatavyadhi samprapti, agitated Vatadosha discomfort is treated with Agnikarma because it relieves pain. Agni has a Ushna, Tikshna, Sukshma, Ashukari, Aamapachaka and Laghu guna.[11] These guna neutralize the vata and kapha guna, resulting in minimizing the severity of the pain.. Agnikarma's heat has the effect of restoring the Vata Dosha to normal. Agnikarma also acts like a dosha dushya vighatan karma because Ushna guna performs two functions-first, Utkleshana of dhatva agni which leads to Sama dhatu digestion and second, dilate the channels of Srotas.[12] It is hypothetically stated that Bindupada Agnikarma which practically used, is probably capable to break down various cycles of painful adhesions.

**DISCUSSION**
According to Ayurveda, Shool is caused due to vitiation of Vata dosha. In the Process of Agnikarma, heat is given at site of pain and the property of Agni is Ushna (hot), Tikshna
(penetrating), Sukshma (minute), Laghu (small), Vyavayi (quick acting) and Vikashi (quickly spreading). These properties of Agni are opposite to property of Vata and Kapha so use of Agni decreases the abnormal function of Vata and Kapha, thereby alleviate pain.\textsuperscript{[13]} According to modern medical science, heat which is given at local area increases the blood circulation by causing vasodilation, also increases elasticity of muscular tissue and exudation of fluid. Heat also improves health by increasing white blood cells and antibodies. Heat phenomena causes tissue metabolism to rise, which aids in local metabolism, the removal of waste items, and normalizing blood circulation, hence reducing pain intensity. It is effective, simple and economical for the patient with no or minimal complications.\textsuperscript{[14]}

**CONCLUSION**

Agnikarma procedure can be done by using different materials and different temperature according to various painful condition to relieve the pain immediately. It is potent and minimally invasive para surgical procedure. From various studies it can be concluded that Agnikarma is found significantly effective in pain management of musculoskeletal disorders. In almost all the studies Agnikarma provides significant relief in acute pain. It is fast and effective procedure which can easily be administered at O.P.D. level. No wound, bleeding, scar or after marks of the procedure is visible on the body. It is a cost effective, non-troublesome procedure which relives pain instantly from the affected sites.

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