

BENEFITS OF AGNIKARMA IN JANU SANDHIGAT VAAT (OSTEOARTHRITIS OF KNEE JOINT)

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ABSTRACT

Worldwide there is extensive morbidity due to musculoskeletal pain. The disease *Sandhigat Vaat* is more prone to affect the knee joint because it is weight bearing joint of the body. It is more prone to develop in overweight patients. It involves symptoms such as *Vedana*, *Shopha* and Crepitus etc. Long term use of analgesics & anti-inflammatory drugs causes severe side effects. *Agnikarma* is one which gives instant relief from pain by balancing local *Vaat* & *Kapha dosha* without any untoward effects. *Agnikarma* is an ancient surgical treatment for pain. It involves thermal cauterization (1st & 2nd degree burn) delivered precisely to the trigger point in the area of allodia. Therapeutic heat transferred increases the *Dhatwagni* so metabolism at *Dhatu* level increases which helps to digest *Ama dosha*. It also removes *Strotovarodha* & increase *rasa rakta samvahana* to the affected site, that means heating of tissues accelerates the chemical changes i.e. metabolism. It includes muscle relaxation & increases the efficacy of muscle action.

Keywords: *Ama*, *Agnikarma*, *Janu sandhigat vaat*, Metabolism, *Strotovarodha*.

INTRODUCTION

Sandhigat vata is characterised by the symptoms such as *Sandhi Shopha* (swelling on joints) & *Sandhishul* (joint pain). It is degenerative disorder, represents failure of the movable synovial lined joints. *Agnikarma* can be done when severe pain occurs in *twaka, mamsa*, *Sira*, *Snayu*, *Asthi*, and *sandhi* due to vitiation of *vata dosha*.^[1]

The diseases treated with *Agni karma* do not recur^[2] and there is no fear of putrefaction and bleeding, and ultimately it produces balancing effect on vitiated *Vata Dosh*. To perform this procedure, many *Dahana*

Upkaranas (devices) like *Pippali*, *Ajashakrit*, *Godant*, *Shara*, *Shalaka*, *Jambavoshtha*, *Madhu*, *Guda*, *Sneha* and different types of metals are used.^[3] The use of analgesics and steroids in old age may produce adverse effects such as gastritis, hyperacidity, and sometimes renal failure.^[4]

It may be more effective in the management of *Janu-gata Sandhivata* (OA of knee joint). *Sushruta* has given direction for the treatment of the *Sandhigata Vata* by *Agnikarma*.^[5] While describing the indications of *Agnikarma*, he also explained that *Agnikarma* can

be done when severe pain occurs in *Twaka, Mamsa, Sira, Snayu, Sandhi*, and *Asthi* due to vitiation of *Vata Dosha*.^[6]

Aim and Objectives: To study the benefits of *Agnikarma* in *Janu Sandhigat Vaat* (Osteoarthritis of Knee joint)

Need

Sandhigat vata is more prone to develop in overweight patients. The therapy guides us towards the drugless i.e. nonpharmacological approaches for the management of musculoskeletal pain where non-steroidal anti-inflammatory drugs & other drugs fail to provide satisfactory & acceptable results.

For the management of osteoarthritis, the patient needs to take analgesics for lifelong. Surgical therapy like knee joint replacement is very costly & even after surgery patient must continue some medicine for long duration. *Agnikarma* is a non-pharmacological treatment which has definite role in *sandhigat vata*. *Agnikarma* can be done when severe pain occurs in *twaka, mamsa, sira, snayu, sandhi & asthi* due to vitiation of *vata dosha*.

Hence considering these facts, the current study has been planned to evaluate the efficacy of *Agnikarma* in

janu sandhigat vata with special reference to osteoarthritis of knee joint.

Mode of Action

How it works: Pain is an unfavourable situation which brings an individual to the physician due to a halt from his routine works. The condition is more painful when mobile joints such as *janusandhi* of the body are involved due to *sandhigat vata*. Pain is entity caused mainly due to abnormal *vata dosha*. *Agnikarma* acts directly on *vata kapha dosha* mitigating the causative factor of pain. Thus, pain is reduced significantly with lowest reoccurrence rates.

Agni karma is performed by special pointed metallic instrument known as *shalaka*. There is a transfer of heat energy (proton neutron electron theory). Apart from this, following local effects can be seen

- Improves local blood circulation
- Stimulation of regional nerves
- Increases tissue metabolism
- Decreases infection
- Stimulation of local inflammatory response
- Reduces joint stiffness
- Muscle relaxation

Table 1: Probable mode of action according to properties of *Agni*

<i>Sukshma</i>	<i>kapha shamak</i>
<i>Laghu</i>	<i>kapha shamak</i>
<i>Tikshna</i>	<i>Vata kapha shamak</i>
<i>Ushna</i>	<i>Vata kapha shamak</i>

Due to different type of dietary habits affect the *Agni* results in formation of *Ama*, leading to *Agnimandya*, which ultimately obstructs & affect knee resulting into *Janugat Vata*.

In *Sandhigat Vata*, the pain is because of *Vayu* predominance. During *Agnikarma Ushna guna* of *Agni* pacifies the *Sheeta guna* of *Vata* and hence decreases the joint pain. *Acharya Charaka* described that *Agni* is the best treatment for *Shoola* ^[7]. *Avarana* which are formed in joint are removed by *Agni* and hence improves the movement of joint by reducing pain. According to modern science due to heat, the blood circulation towards joint increases and give proper nutrition to the

tissues. Also, due to increase circulation unwanted substances are carried away and reduces inflammation.^[8] In chronic inflammation heat is very beneficial ^[9]. Due to increase in heat blood vessels get dilated. Fluid get exudates and leads to increase in white blood cells and antibodies. Due to decreased *sheeta guna* of *vayu*, muscle spasm is released which is helpful in flexion and extension of knee joint.^[10] *Acharya* has told that *Agnikarma* is the choice of treatment on *Stambha*.^[11]

It was concluded that, *Charaka* opines *Agni* as to be important for *Shula* and *Agnikarma* is superior in treatment of *Stambha*.^[12] Modern medicine opines that the blood circulation at the knee joint increases due to the

therapeutic heat lending to supply of proper nutrition to the tissue. This helps to flush away the pain producing substances from the site and reduces local inflammation.^[13]

Acharya Charaka has explained *Agnikarma* as a treatment for *Shool* (pain). *Ushna guna* of *Agni* removes the *Avarana* effectively & stabilizes the *Doshas*.

1. Metabolism- the place where *Agnikarma* is performed local tissue metabolism & rejuvenating

changes takes place thus reduction of intensity of pain.

2. On muscles- rise in temperature reduces relaxation of muscles & increase efficiency of their action.
3. On pain- *Agnikarma* increases local metabolism, the waste product gets excreted the unwanted metabolites & toxins.

Classification of *Agnikarma*

There is no direct description available regarding classification of *Agnikarma*.

Table 2: Heat generated by different materials (*shalaka*) on heating^[14] fill the blank

Sr no.	<i>Shalaka</i>	Temperature (in degree Celsius)	Instrument of heating	Period of heating
1	Gold	62	High pressure gas	10 seconds
2	Silver	350	High pressure gas	10-15 seconds
3	Copper	212	High pressure gas	6 seconds
4	<i>Pippali</i>	57	Candle	60 seconds
5	<i>Ajashakrit</i>	45-55	candle	55 seconds

(*Rajata Shalaka* approximately for 3–4 min and *Loha Shalaka* approximately for 15 min).

Table 3: According to *Dravyas* used^[15]

Types	<i>Dravyas</i> used	Disease situated in
<i>Snigdha agni karma</i>	<i>Madhu, ghrit, taila</i>	<i>Sira, Snayu, Asthi</i>
<i>Ruksha</i>	<i>Pippali, shara, shalaka, godant</i>	<i>Twaka & Mamsa</i>

Table 4: According to *Akriti*^{[16][17]}

<i>Sushruta</i>	<i>Vagbhata</i>
Circular (<i>Valaya</i>)	Semi lunar (<i>Ardhachandra</i>)
Dotted (<i>Bindhu</i>)	Four tailed mark (<i>Swastika</i>)
Straight line (<i>Vilekha</i>)	Eight tailed mark (<i>Ashtapada</i>)
Widespread (<i>Pratisarana</i>)	-----

Suitable Time for *Agnikarma* (*Agnikarma Kala*):

Thermal cautery can be done in all season, except *Sharad* (autumn) and *Grishma* (summer).

In *Sharad* there is a *Prakopa* of *Pitta* and *Agnikarma* also aggravates *Pitta* which may lead to be *Pitta Prakopa Avastha*, due to this reason.^[18]

As *Agnikarma* is contraindicated in *Sharad* and *Grishma Ritu*, in diseases of emergency, it can be done in all seasons after adopting counter methods. *Dalhanacharya* mentions *Sheetachadana*, *Sheeta Virya Bhojana* and *Pradeha* with *Sheeta Virya Dravya* (covering the body or site of burning with moist cloth,

use of cold foods and applying cooling pastes), as the counter methods to mitigate the effect of burning.

Methodology

Procedure of *Agnikarma*: The procedure is performed in three stages as *Purva Karma*, *Pradhana Karma*, and *Paschata Karma* mentioned by Acharya *Sushruta*.^[19]

***Purva Karma*:** *Snigdha Picchila Annapana* (rice and curd) should be given prior to the procedure. The site of *Agnikarma* should be washed with *Triphala Kwatha* then wipe with dry sterilized gauze and cover with

a cut sheet. Then heat the *Shalaka* up to red hot. (Mentioned in table no 1) *Ghritakumari* pulp, *Haridra Churna* kept ready for dressing.

Pradhana Karma: In OA of the knee joint, supine position should be given to the patient as it is comfortable. Irrespective of a specific site, *Agnikarma* should be done at maximum tender site of affected knee joint. The minimum space should be kept between two *Agnikarma* points to avoid overlapping of *Dagdha Vrana*. After *Agnikarma*, fresh *Ghritakumari* pulp should be applied on *Dagdha* to relieve burning pain.

Paschat Karma: After wiping of *Ghritakumari* pulp, honey and ghee should be applied on *Dagdha Vrana*, after that *Haridra Churna* should be applied. Patient should be observed for 30 min after procedure and advise *Pathyapathya* as mentioned in *Sushruta Samhita* [20] until the healing of *Samyak Dagdha Vrana*. Patients should be strictly advised not to allow water contact at *Dagdha Vrana* site for 24 hr.

Contraindications: *Pittaja* & *Raktaja* disorders, weak patients with multiple wounds & those who are not fit for *swedan* karma.

DISCUSSION

Agnikarma is a kind of parasurgical procedure (*anushtra* & *upayantra*). Diseases treated by *agnikarma* may not recur again & very useful in treating chronic disease like *Janu Sandhigat vata*, which is mostly difficult to manage because of the antagonistic property of *doshas*. Due to *tikshna ushna gunas* & *ushna veerya*, it gives good result in *Vata kaphaja* disease. The *ushna* quality of *agni* pacifies cold (*shita*) quality of *vayu* which reduces joint pain & stabilizes movement of *vata*. According to modern science, the therapeutic heat increases blood circulation & provides nutrition to knee joint.

While discussing about the contraindications which are mentioned above like in *Swedaanarhas*, *Agnikarma* will cause further *pitta* vitiation. In diabetic patients it can delay the healing of the wound produced. In debilitated patients due to low mental and physical strength they cannot withstand the thermal cauterization.

Panchadhatu salaka a recent innovation of Prof. P D Guptha is widely used for all types of cauterization. It

is having 40% of copper, 30% of iron and silver, zinc, tin 10%, each. It can transmit more heat energy to deeper tissues with minimum tissue injury.

The actual mechanism of action of *Agnikarma* still remains as an enigma to the medical community. Several theories can be adopted to explain these mechanisms, but their action varies according to the condition. The theory of pro-inflammation- according to which the induction of an acute inflammation will gather a greater number of lymphocytes, neutrophils, histamines and prostaglandins to the site and rectifies the chronic inflammation present at the site. The theory of thermodynamics applied upon a biological system- suggests that when thermal energy is transferred from an instrument to a tissue its internal energy increases and the heat energy gets transferred to the cells. The thermostatic centre of the body immediately gets activated to distribute this localized rise in temperature throughout the body. As a result, vasodilatation occurs and blood flow increases.

CONCLUSION

Agnikarma has a definite role in pain relief in patients of *Sandhigata Vata*. *Agnikarma* provides better results in *vata* & *kaphaj* diseases. *Agnikarma* is a nonpharmacological, OPD procedure required minimum equipment so that it can be used for pain management in *Sandhigata Vata*.

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