



CLINICAL SIGNIFICANCE OF AGNIKARMA W.S.R. TO SHOCK WAVE DIATHERMY: AYURVEDA AND MODERN PERSPECTIVES

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ABSTRACT

Agnikarma, also known as thermal cautery, is a well-known ancient medical procedure that can be found in the Indian system of medicine known as Ayurveda. Sushruta Samhita the well known texts of ancient surgery documented the effectiveness of the Agnikarma for various musculoskeletal disorders. Musculoskeletal conditions like sciatica, spondylosis, osteoarthritis and frozen shoulder, etc. can be relieved significantly with the help of Agnikarma along with other therapies. Agnikarma gives quick relief in pain without any side effects and offers therapeutic advantages in pathological conditions requiring surgical interventions. Agnikarma is a minimally invasive procedure and cost-effective therapy that may eliminate the need for surgical interventions. Similarly modern science also described clinical significance of shock wave diathermy which can be utilized for treating similar types of health problems.

KEYWORDS: Ayurveda, Agnikarma, Shalyatantra, Diathermy.

INTRODUCTION

Agnikarma is a thermal para-surgical procedure in which the word "Agni" is used for the purpose of intentional burning to treat many health ailments. *Agnikarma* is recommended for a variety of *Vata-Kappa* disorders. It greatly reduces the likelihood of the disease recurrence. If *Agnikarma* done correctly then there will be no secondary complications occurs. This therapy can be advises for the management of diseases like; knee pain, lower back pain, sciatica, tennis elbow, migraine, heel pain and rheumatoid arthritis, etc. The procedure of *Agnikarma* involves three steps; *Purvakarma*, *Pradhankarma* and *Paschatakarma*.^[1-3]

✓ *Purvakarma* of *Agnikarma*

Collection of informed written consent from the patient and collection of materials required for the therapy.

✓ *Pradhankarma* of *Agnikarma*

Cleaning of affected part with saline followed by uses of dry cotton gauze to wipe it. Utilization of the appropriate heating element, directly application of heat to a *Shalaka* of *Loha*, *Suvarna*, *Tamrai* and *Mruttika*, etc. *Shalaka* and *Bindu Vishesh* should be applied until *Samyak dagdha lakshanas* are observed.

✓ *Paschatakarma* of *Agnikarma*

Application of *Goghrita* over the affected part after the *Agnikarma*, it will assist in alleviating the burning sensation.

Tools of Cauterization

- The profound tissues require instrument of dormant intensity.
- The sicknesses of skin surfaces utilizes materials like; *Pippali*, *Aja Shakrit*, *Godanta*, *Shara*, *Shalaka*, *Varti* and *Suryakanta*, etc.
- Sicknesses of muscles require tools like *Loha*, *Swarna*, *Tamra* and *Kamsya*, etc.
- *Madhu*, *Guda*, *Vasa*, *Ghrta*, *Taila* and *Madhucchishta*, etc. are utilized for the profound and solid tissues like tendons, ligaments and bones.
- *Pancha dhatu shalaka* comprised of Copper, Bronze, Metal, Tin and Lead also advises for the management different disease.

Indications of *Agnikarma*

- ✚ Migraine
- ✚ Headache
- ✚ Plantar fasciitis
- ✚ Rheumatoid Arthritis
- ✚ Myofascial pain

- ✚ Gout
- ✚ Sciatica
- ✚ Spondylosis

Benefits of Agnikarma

- Quick effects
- Long term pain relief
- No severe complications
- No hospitalization required
- Cost-effective
- Wide range of therapeutic applications

Possible Mode of Action of Agnikarma

Heat of therapy transferred to the skin to clears the blockage in the *Srotas* and boosts blood flow to the affected area. The rise in temperature increases metabolic activity resulting cell movement increments, cell motility and including dilatation of vessels, etc. The patient experiences relief from the symptoms as a result of increased blood circulation, which flushes out the inflammation.

According to Ayurveda, this condition could result from the vitiation of *Vata* with the *Anubandha* of *Kapha*. *Agni* is acquainted through hot *Shalaka* with the impacted region; actual intensity is managed to *Twak dhatu* by hot *Shalaka* delivering *Samyak dagdha vrana*. *Agni's Ushna*, *Laghu*, *Sukshma*, *Tikshna*, *Vyavayi* and *Vikasi* qualities assist in alleviating *Strotaavarodha*, pacifying the vitiated *Vata* *kapha dosha*, breaking the pathogenesis of disease minimizes symptoms of inflammation.

Ushna guna of *Agni* mollifies the *Shita guna* of *Vayu* and diminishes torment. It causes *Pachan* of *Ama* and reduces *Kaphanubandha*, relieving inflammation. The *Agni* improves blood circulation in the heel area, allowing the tissue to get the nutrients it needs. This help to flush out poisons material from blood and diminish irritation.^[3,5]

Contraindication for Agnikarma

This therapy is not recommended for people with *Pitta prakruti*, people who are emaciated, elderly, sensitive, children, pregnant, having multiple body ulcers, anemic and obese person, etc.

Complications of Therapy

Agnikarma that is done incorrectly can cause severe burning, tissue destruction, suppuration, more pain, formation of ulcers and bleeding, etc.

Modern Therapy

The use of heat therapy is common, there are two types of treatment: superficial and deep. Diathermy is a treatment option that involves deep heating specific parts of body with energy sources. Diathermy, also known as "deep heating," it has therapeutic benefits because it focuses on muscles and joints. The most common conditions that are treated with diathermy are those affecting the muscles and joints. It generates heat within

the body's tissues by utilizing an electric current with a high frequency.^[6-8]

Through skin contact, superficial heat therapy improves the mobility of healing tissues and increases blood flow. The interaction of electric waves with biological tissues results in deep heat therapy. Diathermy may employ variety of waves as depicted in **Figure 1**.



Figure 1: Types of wave used in Diathermy.

Warm impacts of heat causes prompt vasodilatation, increase cell digestion and expanded delicate tissue extensibility. The cell's ability to absorb energy from oscillating electrical fields increase cellular activity. These all therapy expanded blood stream, diminished joint agony and decreases edema, etc. The wave therapy amplify growth factor and protein synthesis to stimulate collagen synthesis and tissue remodeling, promote neo-vascularization at the tendon-bone junction, increase leukocyte infiltration, stimulate tenocyte proliferation and osteoprogenitor differentiation, etc.^[8-10]

CONCLUSION

Agnikarma, is a method of heat cautery, is well-known traditional medical practice described in ancient Ayurveda. *Sushruta Samhita* described detailed descriptions of *Agnikarma* and its therapeutic utility in musculoskeletal problems like sciatica, osteoarthritis and spondylosis, etc. *Agnikarma* provides immediate pain relief with no side effects and has therapeutic benefits in pathological diseases requiring surgical intervention. *Agnikarma* is a minimally invasive and cost-effective therapy that may avoid the need for surgical operations. Diathermy is a therapeutic approach that involves energy sources to deeply regions of the body. Diathermy, often known as "deep heating," is beneficial to the body since it concentrates on the muscles and joints. Diathermy is most commonly used to treat disorders affecting the muscles and joints.

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