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Role of *Upanaha* as a Component of Pain Medicine

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ABSTRACT

Ayurveda, the traditional medicine of India has emphasised on various modalities of treatments. This includes both the internal and external treatments explained for different diseases. “A fired building is best saved by pouring water”, in the same way tropical problems are successfully managed by tropical treatment rather than systemic treatment. *Upanaha*, poultice is a kind of topical application. It helps in reducing *vata*dosha, *sheeta* (coldness), *shola* (pain), *sthambha* (stiffness), *gourava* (heaviness). Pain medicine is one of the emerging areas of research and development. *Upanaha* is proved effective in the management of pain and other inflammatory conditions mainly of Locomotor System. An attempt has been made to collect references about *upanaha* from the classics of *Ayurveda* and reviewed systematically.

KEYWORDS

Ayurveda, Upanaha, Topical application, Pain medicine.



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INTRODUCTION

The treatment modality in *Ayurveda* which understands the human being and the disease in him in a holistic perspective are rationally designed in three categories¹.

Daivya Vyapaashrayachikitsa- Destiny or to be healed in its appropriate time. *Yukti Vyapashrayachikitsa*- The physician's planning and execution of the treatment in the given context; *yukti vyapaashraya chikitsa* further includes planning of Systemic medicines (*AntahParimarjana*); Topical or External Therapies (*Bahir Parimarjana*) and Surgical Intervention (*Shastra Pranidhana*) and lastly, *Satwavajayachikitsa*- Controlling the mind/stress management/taking the patient into confidence².

Bahir Parimarjana- Topical/external therapies includes therapies like *abhyanga*, *swedana*, *parisheka* etc using *twak* as the route of administration of medicine. *Upanaha* is a local treatment where in a combination of *churna* (powdered herbs) are made into paste using *snehadravya* (unctuous materials- oils/ghee/fat/bone marrow), *kinva* (fermented liquid), made hot and applied over the required site. This is meant to reduce the local inflammation of the site and also to act as a topical/local analgesic.

Due to increased awareness of side effects of NSAIDs and analgesics, use of natural remedies especially topical applications are being explored due to their relative safety. Topical agents in the form of creams, ointments, gels, lotions, solutions, pastes, and sprays are widely used in practice since ages due to their instant action. Traditionally used topical analgesic agents includes various NSAIDs, capsaicin, local anaesthetics (e.g. lidocaine), rubefaciants or counterirritants (e.g. menthol, camphor, others), and herbal products (e.g. arnica, comfrey and others) which are used in routine practice as an alternative to combat many acute and chronic painful conditions.

ETYMOLOGY AND DEFINITION

The word '*upanaha*' is split as *upa* + *naha*, in which *upa* is *upasarga*(prefix) which means near, *naha-bandhane* means to tie or bind³. The meaning of *upanaha* are bandage⁴, bandage with warm paste of medicaments like *charma*(leather) or *pata*(cloth)^{5,6}, bandage applied for *vranapaka*(suppuration of wound). Most of the classical texts have considered *upanaha* as *bandhana* and *lepa*. Acharya Charakahas mentioned the duration of *upanahainsagnitye* of *upanahasweda*. To prevent the burning sensation the *upanaha*



that is applied at night should be removed in the morning and vice versa. In winter, this duration can be increased⁷. This type of fomentation is without involvement of direct contact with fire, so it is *niragni sweda*⁸. Acharya Charak has mentioned this under *niragni swedan*, while Chakrapani commented this kind of fomentation under both *sagni and niragniswedan*. *Sagni upanaha* is termed as *sankarasweda*. *Niragni Upanaha* causes fomentation by obstructing the radiation of heat from the body due to thickness of the paste used for poultice. Practically, after few hours the *sagni type of upanaha* converts to *niragnitype of upanaha* because the hot *dravya* remains hot for few hours after which it prevents loss of body's internal heat and acts as *niragnisweda*.

Three perspective of *upanaha* is perceived by *Sushruta* in different context,

1. *Saptopakrama*: (seven folds of treatment for inflammatory swelling): For the purpose of converting *amasopha* into *pakvashopha*.

2. *Shasthiupakrama*: The *aamashopha* gets regressed with *upanaha* and *kinchitpakwashopha* will be become *pakva* depending on the condition.

There are three types of *upanaha sweda*. They are as mentioned below⁹

1. *Pradeha*: In this the *vatahara* drugs are made into paste with *amlakanji* etc. and

then added with *lavana* and *sneha* is applied to the affected.

2. *Sankara* or *Pindasweda*: Here the drugs of *Kakolyadi, Surashadi, Eladi Gana* are selected along with other drug *Atasi, Tila, Sarshapa* etc. and made to *kalka, krisara, vesavara* form and then *pottali* is being prepared for *swedana*.

3. *Bandhgana*: The required drugs are made into paste and then heated. This material is then kept in a cloth and tied to the affected part.

The action of *upanaha* on our body can be understood at different biological level. Each level is depicted below -

Effect of Upanaha on Dosha

Upanahasweda is *VataShamak*, by virtue of its *ushna, snigdha*guna. It combats with the properties of *vata dosha* like *sheeta, ruksha, laghuguna*. The associated symptoms due to *prakopa* of *kapha dosha* are also reduced due to properties like *ushna, tikshna* properties of *swedan dravyas*. Thus at the same time, the symptoms produced by the *vata* and *kapha* are being reduced by *upanaha swedana*.

Effect of Upanaha on Dushya

Upanaha swedayogya drugs are mainly of *guru, ushna, tikshna* and *sukshma* quality. By virtue of these qualities drug enters the *dhatus* one by one i.e. *rasa, rakta, mamsa, medaasthi, majja* and *sukra*. Because of increased temperature, the waste products



are removed from the *dhatu*s through increased blood circulation and sweating.

Effect of Upanaha in Agni

Ushna, tikshna gunas of drug intensify the *dhatwagni*. It helps in local tissue metabolism thus helps in removal of waste products from the body.

Effect of Upanaha on Srota

The *swedan karma* itself clears the *srotas* of the body. *Ushna, tikshna, sara* and *sukshma* properties of drugs opens up the *srotas* which are under obstruction. By virtue of *pachana* properties the *dosha* liquefies and finally removes the *upalepa* of the *srotas*.

Modification of Upanaha

Upanaha chkitsa is not only used as a part of pain medicine, it also does *langhana, brimhana* etc. *karma* on the body itself. Some modifications of *upanaha* are being made in recent days for easy to use purpose in OPD/IPD level.

A) *Raping method*: In this method *upanaha dravyas* are prepared in liquid consistency. Then to keep two/three bandage roles for soaking in that *upanaha*. After proper soaking, one can use it for bandaging or raping in a particular part of the body.

Advantage

1. Easy to apply in different parts of the body.
2. Proper pressure can be maintained.

B) *ShiroUpanaha*: Application of *upanaha* on *shiro* is called *shiro upanaha*. It is used for headache, facial palsy etc. diseases. *Shiroupanaha* is technically difficult in women due to long hairs

C) *Sthoulyahara upanaha*: Application of *upanahato* abdomen in obese patients. Here *lekhana dravyas* are main the ingredients. The *upanahadravyas* are applied to the abdomen uniformly followed by tight covering by cloth which helps in reduction of belly fat.

DISCUSSION

“A fired building is best saved by pouring water”, in the same way tropical problems are successfully managed by tropical treatment rather than systemic treatment¹⁰. The action of *upanaha* is based on two factors. One is its *karma*, i.e. *swedankarma, vestanakarma* and another is based on the drug used. *Vatadosha* and *ruja* is best treated with *upanaha*. The ingredient of *upanaha* is for alleviating *vatadosha*. The *karma* i.e. *bandhana* or *vestana* (tying of cloth) treats *vata dosha*¹¹. *Ushnata* of drugs helps in alleviating coldness, pain, stiffness. This therapy is administrated to prolong thermoregulation to the affected area by radiation effect. The bioavailability of the drug to the affected site increases by regulation of the heat effect. Out of four



Tiryakdhamanis, each one is divided into hundred and thousand times thus become innumerable. These supply the body like network and their openings are attached to *roomakupa*. *Virya* of *abhyanga*, *parisheka*, *alepa* etc. enter into the body after undergoing *paka* by *bhrajak pitta* in the skin.

Effect of *Upanaha* on pain regulation through neural pathway:

The action of the skin is coordinated with the functions of other excretory organs. The secretion of sweat is under autonomous control. The tactile sensation in the skin including hairs and its secretion produces some nervous changes. Thus, sudation can bring about changes indirectly on the autonomic nervous system and the heat can bring about changes in conduction of nerve stimuli, by changing sodium ion concentration.

Secretion of sweat is produced by direct or reflex stimulation of the centres in the spinal cord, medulla, hypothalamus or cerebral cortex.

Sweat secretion is increased with the rise of external body temperature. This is also called thermal sweating. This thermal sweating is produced in two ways;

By the rise of body temperature directly affecting the hypothalamus and reflex from the stimulated 'warm' nerve endings in the skin. Thus by exposing the small area of

skin to the heat, for example by exposing hands to the heat not only the hand, entire body sweats, because the spinal segments innervating the given area of the skin and of the other segments. This thermoregulatory system indirectly reduces pain in the affected part.

Biophysical effect of temperature on pain regulation

Circulatory effect- there is stimulation of superficial capillaries and arteriole causing local hyperaemic and reflex vasodilatation.

Metabolic reaction- temperature will rise the chemical activity in cell and metabolic rate will increase. The energy expenditure will increase and protein denaturizing will occur in human tissue.

Vascular effect- there are three factors that cause vasodilatation – an axon reflex release of chemical mediators, secondary to temp elevation, local spinal cord reflex.

Neuro-muscular effect- heat is effective to provide analgesic and assist resolution of pain muscle guarding spasm. Heating of peripheral nerve elevate pain threshold remarkably reduce muscle spasm.

Connective tissue effect- temperature elevation in combination with a stretch can alter elastic properties of connective tissues. The elastic properties of connective tissues result in plastic elongation

Oral anti-inflammatory drugs act by inhibiting the COX pathway and



prostaglandins, thus reducing the pain and inflammation. *Upanaha* also have the similar therapeutic action, but with local effect. The exogenous opioid such as morphine applied on the skin act similar with the endogenous opioids¹². But, here the important thing is that in local application the adverse effects of morphine is not noted. *Upanaha* can also be applied as a easy to use and effective *Panchakarma* procedure in different sorts of pain management.

Drug delivery

The primary barrier to absorption of exogenous substances through stratum corneum. Rate of absorption is directly proportional to concentration of drug in vehicle, partition co-efficient, diffusion co-efficient and thickness of the stratum corneum. Physiological factors that affect per coetaneous absorption include hydration, occlusion, age, intact versus disrupted skin, temperature and anatomic site.

Among vehicles, greases are anhydrous preparations that are either waste insoluble or fatty. Fatty agents are more occlusive than water soluble. They restrict trans-epidermal water loss and hence preserve hydration of stratum corneum.

Absorption depends upon lipid solubility of the drug since the epidermis act as lipid barrier. The dermis however is freely

permeable to many solutes. Suspending the drug in an oily vehicle can enhance absorption through the skin. Because hydrated skin is more permeable than dry skin.

Application of medicaments, heat and massage definitely helps in eliminating the number of noxious elements through skin. The application of heat promotes the local circulation and metabolic activities and open the pores of the skin to permit transfer of medicaments and nutrients towards o needed sites. Thus *upanaha* can help in the field of pain management of locomotor and musculoskeletal system.

CONCLUSION

Upanaha is an effective treatment for *Vata Dosha* and in the management of pain of musculo skeletal and locomotor system. It can be modified according to the patient need like *Brimhana Upanaha*, *Langhana Upanaha*, *Pachana Upanaha* based on *dravya* used and different techniques according to the part to be. *Upanaha* is fast acting local application with nearly no side effect. This *Panchakarma* therapy is a ray of hope in the field of pain medicine



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