

“Review on Post Operative Pain Management in Ayurveda”

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ABSTRACT

Patients are often afraid to undergo surgery due to the pain (vedana) which is the commonest manifestation of any surgical procedure. Sinking sensation, apprehension, sweating, nausea, palpitation and increase or decreases of blood pressure (pain shock) are the sequel of excessive pain that is unbearable. Adequate pain control is essential to decrease the manipulation of the surgical site and thus, reduces swelling, hematoma formation, and infection. It is of great disadvantage that ayurveda lacks use of effective analgesics or the techniques and procedures which can cause analgesia and relieve pain. This has been listed as one of the major causes of downfall of Ayurvedic surgeries. There has been a continuous search for effective ways through which pain can be managed by ayurvedic treatment. This article reveals the various ways through which pain can be managed holistically by further cutting down costs and reduce the complications associated with the opioid and non-opioid drug usage and dosage.

Key Words: Auyrved, Post operative pain management, Vedanasthapana, Analgesic

INTRODUCTION

Sushrutacharya has made special emphasis more approach to the surgical procedures and treatment modalities of diseases through different surgical procedures. He was well aware that the limiting factor for a patient to treat surgically was the pain.

Pain remains the most agonizing symptom of which a patient to be operated is most concerned of.

‘Before whom, In all time, Surgery was Agony By whom, pain in surgery was averted Since whom, science has control over pain’

... *Sir Wililiam Morton*

Pain is a more terrible lord of mankind than even death himself - Albert Schweitzer

Pain is an unpleasant sensory and emotional experience due to a noxious stimulus associated with potential tissue damage.¹ It is the most common and major symptom in most of the medical conditions affecting a person’s quality of life.

In Ayuvedic terms the pain is referred at different places by different Acharyas as *Shool, Ruja, Vedana and Ruk* revealing condition of Pain. In Charak Samhita *Angmardprashaman* (10 drugs used in treatment of Body ache), *Shoolprashaman & Vednasthapak Mahakashaya* is mentioned.^{2,3}

In Ayurveda the different treatment modalities have been mentioned such as *Snehan* (Oleation), *Swedan* (Fomentation), *Agnikarma* (Heat burn Therapy), *Jalaukaavcharan* (Leech therapy), *Vedhankarma* (needle puncturing), *Lepa* (medicated paste), *Bastikarma* (enema) in context to management of pain. But in managing the pain on postoperative period the above mentioned modalities may be cumbersome and not feasible/practical to employ. But a logical use of such therapies in singular or combination could be a holistic approach towards pain management through ayurveda.

Hence it is essential to look out for options which are more suitable and practical so as the patient has good acceptability with significant pain relief. Hence the less interventional palliative (shaman) type of chikitsa is much helpful in managing the post operative pain.

This article will be useful for the research scholars who are exploring the role of Ayurveda in the pain management especially in the post operative period.

CONCEPT OF PAIN IN MODERN SCIENCE AND ITS PHARMACOLOGICAL ASPECTS:

Pain has been always associated with surgery. And the post-surgical pain was very poorly managed and nothing was done to relieve the patient from pain. The post-operative pain management is special area where doctors has to deal with great patience particularly lower abdominal and in pelvic surgeries, ano rectal surgeries. Surgeries under spinal and epidural anesthesia has analgesic effect for hours after procedure. Epidural anesthesia can be continued and analgesia can be maintained but chances of infection may increase.

Since many years narcotics have been used as strong analgesics in relieving severe acute pain but continuous use and high dose of these drugs leads to many side-effects like respiratory depression, apnea, nausea, vomiting, physical and mental dependence, etc.

The other groups, i.e. the nonsteroidal anti-inflammatory drugs (NSAIDs) are increasingly in use today. But these drugs also cause severe and sometimes fatal gastrointestinal bleeding, hyperacidity, which reduces the gastric normal mucus layer which acts as a protective layer, patients with hypertension, cardiac disease or pre-existing kidney disease are also at risk of kidney damage.⁴

CONCEPT OF PAIN IN AYURVEDA:

In Ayurvedic texts, various terms such as, Ruk, Ruja, Vedana & Shool are commonly used for pain, however, 'Shool' is more appropriate term amongst all which means – a condition with state of discomfort to body & mind. Thereby, stating the definition of Shool as experience similar to driving a nail into the body of the person.⁵ It has been further elaborated that out of Tridoshas, vitiated 'Vata' is the main causative factor responsible for all painful conditions. This vitiation of Vata occurs in two ways, viz. Dhatukshya janya Vata prakop (increased catabolism) and Margavarodh janya Vata prakop (channel obstruction). Furthermore, the 'Ruksha' (Dryness) and 'Chala'(Vibrations) Gunas (characters) of Vata are mainly involved in the manifestation of pain.⁶

APPROACH TO PAIN MANAGEMENT THROUGH AYURVEDA:

There are a variety of options available in ayurveda through which pain can be managed. Considering the risks/adverse effects and of modern pharmacological management of pain, these ayurvedic modalities can be helpful in treating pain holistically bypassing above complications.

There are various ways to manage pain in Ayurveda such as:

A) Snehan:

It is the process of oleation usually practiced before *Panchakarma* treatment. Divided into *Sarvanga* and *sthanika*. Due to snehana vata dosha gets pacified. According to modern perspective the Neuro-hormonal effects of *Bahya Snehan* has been established, stating that massage increases levels of Dopamine, increases availability of serotonin, may elevate epinephrine (adrenaline) and release of endorphins. (Research conducted at TOUCH Research Institute at the University of Miami). All these neuro-hormones alter brain chemistry which in turn reduces response to pain sensation.⁷

B) Svedana:

Hot fomentation also a purvakarma in panchakarma done usually in conjunction with *snehana*. This procedure is done to curb the Vata Dosha vitiated due to increase in its Sheeta property. Transient Receptor Potential Channels are mainly found in nociceptive neurons of peripheral nervous system. Role of *Swedan* in management of pain can be explained through TRPV1 channels which are responsible for perception of heat and pain.^{8,9}

C) Agnikarma:

Acharya Susruta has considered *Agnikarma* superior than *Aushadha*, *Kshara* and *Shashtra Chikitsa* as the diseases which are not cured by the above are cured by *Agnikarma* and the diseases treated by *Agnikarma* do not reoccur.¹⁰ *Agnikarma*, leads to pacification of *Vata & Kapha Dosha*, thereby reducing pain. Similarly, *Agnikarma* pacifies *Manda Dhatvagni* and facilitates *Amapachan* and increases the *Dhatvagni*, thereby, metabolite toxins are removed. Thus, pain caused by the accumulation of metabolic waste products in the tissues is immediately relieved after *Agnikarma* Therapy.¹¹

D) Raktamokshana:

A) By Jalauka:

It involves application of *Jalauka* (Leeches) for removal of vitiated blood at the site of pain.¹² The sensory stimulus caused by the pain and burning sensation of the leech bite can alleviate the symptoms of the patient through the “gate theory”. Leeches have analgesic effect in osteoarthritic pain which may be due to salivary secretion of analgesic agents, such as inhibitors of kallikrein and anti-inflammatory agents, including protease inhibitors.¹³ It has also been postulated that Met-enkephalin and Leu-enkephalin are small endogenous peptides that bind to the same specific receptors as opiate analgesics to relief pain.¹⁴

B) By Vedhan/Viddha Karma:

It is one of the eight *Shastrakarma* (surgical measures) mentioned in Sushrut Samhita.¹⁵ This is a sterile procedure which includes piercing the points with special hollow needles considering the anatomy of Marma (vital points) as per Ayurveda. The piercing leads to painful mechanical stimulus which causes release of endorphins thereby, causing immediate pain relief. Another procedure called as Vidhaagni (combination of Vedhankarma and agnikarma) is also practiced in painful conditions with varied results.

E) Lepana:

This is application of medicated paste over the painful body parts. Sushruta has described *Lepan* in *Twakgatvata*, *Mansagata Vata* and in management of pain due to *Vranshopa*.^{16,17}

F) Bastikarma:

According to Ayurveda Vata is the main factor in causation of pain related diseases and Basti treatment is the best treatment for degenerated Vata. Owing to its utmost importance Acharya Charaka has called *Basti Chikitsa* as “*Ardha Chikitsa*” of Ayurveda.¹⁸

It is hypothesized that *Basti karma* has a feature to regulate sympathetic activity, thereby, balancing the autonomic nervous system. Hypothalamus-Pituitary-Adrenal axis (HPA) gets activated with the visceral afferent stimulation, involving the release of neurotransmitters from adrenal gland called cortisol, a neuroendocrine hormone, acts as a potent anti-inflammatory systemically.^{19,20,21}

5. Shaman Chikitsa(palliative care) In post operative Pain Management:

These drugs include the classical herbal/ herbomineral compounds such as

Guggulu Kalpa (Triphala; Yograj; Mahayograj; Kaishor, Simhanad, Rasnaadi; etc

Ras/bhasma: Vatagajaankush Rasa; Mahavatagajaankush Rasa; Vatavidvansaka Rasa; Mahavatvidvansaka Rasa; Brihatvatchintamani Rasa; Ekangaveera Rasa

Churna: Trikatu Churna; Panchakol Churna; Ajmoodadi Churna

Above drug formulations can be utilized and tested for their efficacy in pain management. In addition to above drugs some formulations and combinations are also proven to be effective in pain management.

Mahanta Rabi Narayan et al conclude in their study that *Vrihat Panchamoola* (*Bilwa*, *Gambhari*, *Shyonaka*, *Patala* and *Agnimantha*) in the form of *Ghanasatwa* given orally, produces good analgesic response during post operative period in L.S.C.S. patients and found almost identical as compared to Diclofenac Sodium in terms of pain relief and duration of action.²²

Geetanjali Mandlik et al in their study state that a drug formulation in the form of capsule containing *Hemidesmus indicus* (Anantamul) 100 mg; *Ricinus communis* (Shetverenda) 100 mg; *Moringa pterygosperma* (Sajina) 100 mg; *Tinospora cordifolia* (Gulantha) 125 mg; *Boerhavia diffusa* (Rakta Punarnava) 75 mg effectively reduces postoperative pain after dental extraction.²³

Pawaskar Mayur in their study POST-OPERATIVE PAIN MANAGEMENT WITH AYURVEDA arrive at a conclusion that pain in post-operative cases of hydrocele can be effectively managed by a combination treatment protocol including *Triphala guggulu*, *Gandhak Rasayana*, and *balataila matrabasti*. It can also be concluded that if the above said combination is followed then administration of any variety of analgesics is not required for pain management in operated cases of hydrocele. *Triphala Guggulu* and *Gandhak rasayan* are having *Vrana Shodhana*, *Vrana Ropana* and *Vranavasadana* properties which results in relieving inflammation and hence pain and tenderness.²⁴

A recently unpublished study of chaturbeej caplet showed that chaturbeej caplets were significantly effective in post-operative pain management.

FURTHER SCOPE:

The *Vedanasthapaka Mahakashaya* of *Charaka Samhita*²⁵ can be used in the postoperative pain management as it acts directly on *Vata Dosha* and is easily available and can be administered in palatable formulations to the patient. Various formulations such as *ghanasattva*, suppository, tablets, can be used in clinical trials to establish their efficacy in post operative pain management.

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