



PAIN MANAGEMENT THROUGH AYURVEDA: A REVIEW ARTICLE

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ABSTRACT: -

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Pain is the most common reason for physician consultation in most developed countries and a major symptom of many medical conditions. Pain is the most common symptom of an inflammatory process. Pain, when it is not effectively treated and relieved, has an unfavourable effect on all aspects of quality of life. Frequent use of painkillers and NSAIDS, are associated with a risk of gastrointestinal bleeding, other potential side effects and may hamper the body's defence mechanism.

In Ayurveda, pain can be co-related to *Shoola*. According to Sushruta, vitiated *Vata Dosha* is the root cause of all types of pain. Further, the vitiation of *Vata* may be *Swatantra* or *Paratantra*. Once *Vata Dosha* is treated efficiently, the pain subsides accordingly.

This paper aims to review various pain management practices from an Ayurvedic perspective. After reviewing the various classical texts, it can be concluded that internal preparations with medicinal properties i.e. *Vedna Sthapan*, *Shoola Prashaman*, *Angamarda Prashaman*; and external therapies like *Snehan*, *Swedan*, *Basti*, *Nasya*, *Shirodhara*, *Agnikarma*, *Raktamokshana* and *Lepa* play an effective role in the pain management. The selection of therapy depends on the cause of vitiation of *Dosha*, the site, extent of pain, duration and types of pain.

Keywords: -Pain, Pain management, *Shool*, *Shoola Prashaman*

Introduction:-

According to the International Association for the Study of Pain (IASP), pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage".^[1]The word pain comes from the Latin word 'Poena', meaning punishment. Pain is the reason for initial contact with any physician for the vast majority of medical problems, e.g., abdominal pain, chest pain, limb pain, etc.

Pain can be classified as per duration (acute, subacute, and chronic); Nociceptive Pain, Neuropathic Pain, Psychogenic Pain, Breakthrough Pain (ex., Oncological Pain), Pain Asymbolia (ex., Diabetic Neuropathy). Painkillers, with frequent usage kill resistance power. Nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids are preferred choices in pain management. But all these also have considerable serious long-term complications and adverse drug effects on the body.

Classical texts of Ayurveda, like Sushrut Samhita, explain pain as a separate entity termed *Shoola*. *Shoola* occurs due to the vitiation of the *Vata Dosha*, which may be *Swatantra Shoola* or *Paratantra*. Vitiation of the *Vata Dosha* causes obstruction of channels and depletion of tissues. It can appear as a symptom or complication of a disease.

In spite of advancement of research in drug discovery, pain still remains the major cause of disability, affecting a large population in the world. Understanding the pathology of pain and its management with an Ayurveda perspective may be the answer to manage various types of pain symptom.

This article reviews several treatment therapies mentioned in Ayurveda in relation to pain management. Internal medication and external therapies such as *Snehan*, *Swedan*, *Bastikarma*, *Nasya*, *Shirodhara*, *Agnikarma*, *Raktamokshana*, and *Lepa* can be useful in the pain management.

Aim and objective: -

1. To review and compile various pain management therapies in classical Ayurvedic texts.
2. To understand the concept of *Shoola*.

3. To understand the concept of Pain.

Material and Methodology:--

Different classical ayurvedic texts i.e. Charak Samhita, Sushrut Samhita, and research paper published on pain management were reviewed for understanding the concept of *Shoola*, Pain and to compile different pain management therapies in *Ayurveda*.

Review of literature and Discussion:-

Pain in Ayurveda -

In Ayurvedic texts various terms such as *Ruk*, *Ruja*, *Vedana*, and *Shoola* are commonly used for pain; however, '*Shoola*' is the most commonly used and appropriate term amongst all. Sushruta mentions *Shoola* as a condition where the patient experiences the sharp intensity of pain as if pierced with *Shanku*. It has been further elaborated that out of *Tridosha*, vitiated '*Vata*' is the main causative factor responsible for all painful conditions. This vitiation of *Vata* occurs in two ways, viz. *Dhatukshyajanya Vata Prakop* and *Margavarodhjanya Vata Prakop* (channel obstruction).^[2] Furthermore, the '*Ruksha*' and '*Chala*' *Guna* of *Vata* are mainly involved in the manifestation of pain.

Classification of Pain ^[3]-

Pain is a protective body mechanism. Pain can be classified as per duration (acute, subacute, and chronic); nociceptive pain; neuropathic pain; psychogenic pain; breakthrough pain (ex., oncological pain); and pain asymbolia (ex., diabetic neuropathy).

Nociceptive pain is caused when noxious stimuli are perceived by the free nerve endings of the afferent sensory nerve axon. From an anatomical point of view, nociceptive pain can be classified as per the axons involved in perception of pain as fast pain (mediated by A fibre), which is sharp, and slow pain (mediated by C fibre), which is diffuse, dull aching. Apart from A δ and C fibres, A β fibres carry non-noxious stimuli. From a locational point of view, nociceptive pain is classified as somatic (superficial and deep) and visceral. From the receptor point of view, nociceptive pain is classified as thermal (a transducer such as TRPV1), mechanical (receptors responding to excess pressure), chemical (receptors

responding to chemicals like capsaicin), silent (receptors responding only when inflammation sets in), and polymodal (many neurons performing a single function).

Neuropathic pain is caused by damage or disease affecting any part of the nervous system involved in bodily feelings. Neuropathic pain may be divided into peripheral, central, or mixed (peripheral and central) neuropathic pain. Peripheral neuropathic pain is often described as burning, tingling, electrical, stabbing, or pins and needles. Some manifestations of neuropathic pain include traumatic neuropathy, painful diabetic neuropathy, and postherpetic neuralgia.

Psychogenic pain, also called somatoform pain, is caused, increased, or prolonged by mental, emotional, or behavioural factors. Headache, back pain, and stomach pain are sometimes diagnosed as psychogenic. Breakthrough pain is transitory pain that comes on suddenly and is not alleviated by the patient's regular pain management. It is common in cancer patients. Pain asymbolia, such patients report that they have pain but are not bothered by it; they recognize the sensation of pain but suffer little, or not at all.

Pharmacological Pain Management in Conventional System of Medicine (WHO – Step Analgesics Ladder) [4]–

The WHO 3-step guidelines were first published in 1986 and are considered to be the gold standard for managing pain in advanced cancer. This analgesia ladder has been modified for acute pain, chronic non-cancer pain, and cancer pain. This revised ladder integrates a fourth step, which includes nerve blocks, epidurals, and neurolysis. (Vargas, 2010).

Step 1: Non opioids ± adjuvants

Step 2: Non opioids + Weak opioids ± adjuvants

Step 3: Non opioids + Strong opioids ± adjuvants

Step 4: Nerve Blocks, Epidurals

Adjuvant analgesia tends to be drugs that are licensed for indications other than pain. Hence, they are not primarily classified as analgesia even though they may relieve pain that

is usually not responsive to standard analgesia which includes antidepressants, anticonvulsants, antispasmodics and steroids etc (Vargas, 2010; WHO, 1986).

Management of pain through Ayurveda perspective

(A) Internal Medication [5]

Ayurvedic formulations such as *Angamarda Prashaman*, *Shool Prashaman* and *Vednasthapak Mahakashaya* are mentioned in Charak Samhita. The *Angamarda Prashaman Mahakashaya* can be prescribed for body ache in both *Dhatukshaya* and *Margavrodhjanya Vataprakop*. *Shool Prashaman Mahakashaya* has *Ushna* property, hence, useful in abdominal colic; whereas, *Vednasthapak Mahakashaya* has *Kashaya Rasa* and *Sheeta Virya* can be used effectively in pain management due to traumatic conditions.

Medicines like *Ajmodadichurna*, *Shankhvati*, *Rasonadivati*, *Agnitundivati*, *Hingvadi Churna* etc. are used in *Udarshool* and formulations of *Guggul*, *Shallaki*, *Dashmool*, *Shunthi*, *Haridra*, *Ashwagandha*, *Rasna*, *Rakta Chandan* are used effectively in other painful condition.

(B) External Therapy: -It include;

1.Snehana⁶

Snehan and *Swedan* are mentioned as *Purvakarma* and practiced before all *Panchkarma* procedures. *Snehan* includes lubrication of the body, chiefly with medicated oil, oil can be used both internally and externally. For this, either medicated oil or *Ghruta* is given for oral intake, or warm medicinal oils are applied in large amounts all over the body or to a part of the body. *Sneha* may be employed according to the *Dosha*. *Vata Dosha (Dhatukshayjanya)* gets pacified by *Sneh* (oleation). *Snehan* therapy is useful in *Swatantra Vata Prakopajanya Shoola*.

As per the modern perspective, the neurohormonal effects of *Bahya Snehan* has been established, stating that massage increases levels of dopamine, increases the availability of serotonin, may elevate epinephrine (adrenaline), and may release endorphins. All these neuro-hormones alter brain chemistry, which in turn reduces the response to pain sensation.

[7]

2.Swedana [8]

Sweda, *Gharma* and *Nidagha* are the synonyms having the meaning perspiration. It liquefies the *Dosha* and *Mala* due to its hot and sharp attributes. Different types of *Swedan* are discussed in Ayurveda considering different diseases and their stage. *Sagni-niragni*, *Ruksha-snigdha* and *Ekanga-sarvanga Swedan* are different types of *Swedan* discussed in the text. Following some of the types are useful to relieve the localised or generalised pain in body.

a) Nadi Swedan :-*Nadi Sweda* is a form of sweating in which the steam are sent through a tube. It is a form of *Bashpa Sweda* .The Vapours coming through the tube are made to reach the afflicted parts of the body after oil massage. This is an instant pain reliever procedure.

b)Patra Pinda Swedan [9]:-*Patra Pinda Sweda* is a form of *Pinda Sweda*, which is nothing but *Sankara Sweda* of Acharya Charaka. It is a form of *Tapa Sweda*, as per Sushrut and Vagbhat. It includes fomentation using *Pinda* (bolus) of prescribed drugs with or without being wrapped in cloth. *Patra Pinda Sweda* can further be classified into *Ruksha* and *Snigdha Pinda Sweda*. In *Ruksha Pinda Sweda*, hot solid substances such as sand, brick and stone are used. It is indicated in *Kapha* and *Ama* related disorders affecting joints and muscles, whereas *Snigdha Sweda* is advised in conditions where the pain and related symptoms are due to *Vata Dosha* only. *Patra Pinda Sweda* is a form of *Snigdha Sweda* and is an unparalleled treatment in painful conditions caused mainly by *Vata Dosha*, usually in degenerative diseases. Moreover, it can be used in *Vata Kapha* conditions also, by altering the drugs. Leaves which can pacify morbid *Vata* and *Kapha* are used in the bolus for tackling inflammatory diseases of joints and soft tissues. It is generally indicated in the ailments arising due to *Vata*, *Kapha* and *Vata-kapha Dosha*.

c)Parisheka Sweda [10]:-

This is a process by which the body is made to perspire by means of pouring warm decoction from special herbs with a special vessel from a certain height in rhythmic manner and is rubbed into the body. This method alleviates pain due to isolated *Vata* or *Vata* - predominant disorders.

The role of *Swedan* can be explained with transient receptor potential channels which 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.^[11]

3. *Basti* ^[12]

Basti is considered as an *Ardhachikitsa* and *Shresthachikitsa* for pacifying vitiated *Vata*. This procedure includes giving medicated decoction or oil into the anal region. Since every pain is attributed due to vitiated *Vata Dosha*, *Basti* is useful in order to correct this imbalance.

It is hypothesized that *Basti* 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.^[13]

Sthanik Basti :- *Kati Basti*, *Janu Basti*, *Griva Basti*, are organ related procedures performed at respective sites to manage pain due to *Swatantra Vata Prakopa* and at the same time strengthen them.

4. *Nasya*

It is one among the five purification procedures (Panchakarma). In this procedure, the medicines are instilled through the nostrils. It is indicated in the diseases of head and associated structures. *Nasya* is of three types based on actions *Rechana*, *Tarpana*, and *Shaman*. *Rechana Nasya* is useful in disorders of head due to vitiated *Kapha Dosha*, stiffness, numbness and heaviness of head; anorexia, headache, rhinitis, epilepsy and loss of smell and *Tarpana Nasya* is for disorders of head due to vitiated *Vata Dosha*, facial palsy, tremors in head, severe earache, frozen shoulder, premature greying of hair.^[14]

5. *Shirodhara*

In this, lukewarm oil or decoction or any other liquid like *Takra* is made to flow on the head. Due to constant flow of *Dhara Dravya* over the forehead a vibration area is

generated which stimulates nerve endings. A little amount of acetyl choline is released when the autonomic nervous system's nerve endings are aroused. This small amount of acetyl choline generated reduces blood pressure, which decreases the central nervous system's activity and has a tranquillizing effect. From Ayurveda point of view vitiated *Vata Dosha* is the triggering factor for pathogenesis of disease symptom produced in *Vatika Shiroroga* (TTH).^[15]

6. *Agnikarma* ^[16]

This unique procedure helps in instant pain management in various painful conditions mainly of musculoskeletal pain like *Parshnishool* (Calcaneal spur), *Sandhigatavata* (Osteoarthritis), *Avabahuk* (Frozen shoulder).

According to Ayurveda, due to *Ushna Guna* produced during this procedure helps in pacification of *Vata-Kapha Dosha* and thereby reducing pain. Pain may be possibly caused as a result of the accumulation of metabolic waste products in the tissues, and an increased flow of blood (vasodilatation due to heat) in the region is the possible mechanism that is responsible to remove these substances and relieve pain. Another possibility is that the pain releasing mechanism is associated with muscle relaxation.^[17]

7. *Raktamokshana*

Raktamokshana (means let out the blood from body) is blood cleansing and purification therapy. *Raktamokshana* is performed in various ways the common methods used in practice are as follows.

a) ***Jalaukavcharan (Leech therapy)*** ^[18] :- The characteristic feature of leech is it only sucks the impure blood from the body. Leeches are usually used where the cause of pain lies in blood tissue. In conditions like painful cracked heels or soles and palms due to excessive dryness, headache due to vitiated *Pitta*, some skin diseases, swelling in various tissues or joints, pain due to contused wound where blood capillaries get ruptured and the blood gets accumulated under the skin resulting in pain.

It has 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.^[19]

b) **Viddha Karma**:- This is a miniature of bloodletting; a very small puncture is made with the help of a needle considering the anatomy of *Marma* (vital points) as per Ayurveda. This procedure is usually used to relieve headache, eye ache, tonsillitis, nasal blockage, renal colic, pain related to nerve defects, joint pain, radiated pain, and much more.

Viddha Karma leads to painful mechanical stimulus which causes release of endorphins thereby, causing immediate pain relief.^[20]

8.Lepa

Lepa literally means application of paste of herbs on the affected area and leave it to dry. Typically used in conditions of swelling, inflammation, sprain etc.

The mechanism of action of *Lepa* can be explained with the Mechanism of transduction of cold thermoreceptors as for example Menthol sensation is perceived via TRPM8 channel; whereas role of *Pradeha* can be explained with TRPV1 channels and furthermore certain warm receptors also being sensitive to painful stimuli function as nociceptors.^[21]

The main culprit causing pain is *Vata*, and *Snehan Swedan* pacifies *Vata*. *Basti* works at the *Moolsthana* of *Vata* to remove the vitiated *Vata* from the body, thereby relieving the pain of the respective disease. *Sthanic Basti* produces the cumulative effect of *Snehan* and *Swedan* to pacify *Vata* and subside local pain in the head, cervical area, lumbosacral area, knee, etc. *Nasya* and *Shirodhara* have been found to be safe and effective treatments for headaches. *Agnikarma* is a procedure frequently indicated in many *Vata* and *Kapha-predominant* conditions. It is a very effective procedure for pain management because it inhibits the pain pathways. Bloodletting also relieves the pain by removing the pain-causing agents and the vitiated *Dosha*. On the other hand, many chemicals present in leech saliva relieve the pain by blocking the receptors responsible for producing the pain.

Many single drugs and formulations have been stated in Ayurveda to manage different kinds of acute and chronic pain. All the above measures give miraculous results.

CONCLUSION:-

In Ayurveda, pain is caused due to vitiation of *Vata Dosha*; this may be *Vata* alone (*Swatantra*) or accompanied with other *Dosha* (*Partantra*). Therapies mentioned here i.e. *Snehan, Swedan, Basti, Nasya, Shirodhara, Agnikarma, Raktamokshana, Lepa*, etc , pacifies the vitiated *Vata Dosha* in the body and manages painful conditions. The selection of therapy depends on the cause of vitiation of *Dosha*, the site, extent of pain, duration and types of pain. As these therapies defends a good deal on the pain management, these therapies are highly recommended in the pain management.

REFERENCES: -

1. <https://pubmed.ncbi.nlm.nih.gov/32694387>
2. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.II, Chikitsa sthana, Adhyaya 28, Vatvyadhichikitsaadhyay, Verse 59, Chaukhamba Sanskrit Pratishthan, Varanasi, Reprinted 2013, p.699
3. <https://en.wikipedia.org/wiki/Pain>
4. <https://www.ncbi.nlm.nih.gov/book/nbk554435>
5. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.I, Sutrasthana, Adhyaya 4, Shadvirechanashatashritiya Adhyaya, Verse 44,45,47, Chaukhamba Sanskrit Pratishthan , Varanasi, Reprinted 2013, p.77
6. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.II, Siddhi sthana, Adhyaya 1, Kalpana Siddhiradhayay, Verse 07, Chaukhamba Sanskrit Pratishthan, Varanasi, Reprinted 2013, p.876
7. <https://www.britannica.com/science/thermoreception>
8. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.I, Sutrasthana, Adhyaya 14, Verse 4-5, Swedaadhyaya, Chaukhamba Sanskrit Pratishthan, Varanasi, Reprinted 2013, p.217
9. Surendran E, Panchakarma, A guide to treatment procedure in ayurveda, 1st Edition, Kottakalam, Vaidyaratnam P.S. Varier Ayurveda College, 2006,

10. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.I, Sutrasthana, Adhyaya 14, Swedaadhyaya, Verse 44, Chaukhamba Sanskrit Pratishthan, Varanasi, Reprinted 2013, p.217
11. Amar P. Dwivedi, Anaya Pathrikar, Anjna Kulkarni. Review of Concept of Pain Management in Ayurveda. International Journal of Research in AYUSH and Pharmaceutical Sciences, 2017;1(4):168- 171.
12. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.II, Siddhi sthana, Adhyaya 1, Kalpana Siddhiradhayay, Verse 27-31, Chaukhamba Sanskrit Pratishthan, Varanasi, Reprinted 2013, p.881
13. https://www.researchgate.net/publication/282324532_Understanding_The_Mode_Of_Action_Of_Bastikarma_Medicated_Enema
14. Acharya Vidyadhar Shukla, Prof. Ravi Dutt Tripathi, Caraka Samhita of Agnivesa, elaborated by Caraka and redacted by Drdhabala, Vaidyamanorama Hindi Commentary, Vol.II, Siddhi sthana, Adhyaya 9, Trimarmiya Siddhiradhayay, Verse 93-94, Chaukhamba Sanskrit Pratishthan , Varanasi, Reprinted 2013, p.960
15. <https://ayushportal.nic.in/pdf/2868.pdf>
16. Kaviraja Ambikadutta Shastri, Sushruta samhita of Sushrut, Part I, Sutrasthana, Adhyaya-12, Agnikarmavidhi , Chaukhmbha Sanskrita Sansthan, Varanasi, Reprint 2012, p.50-56
17. Dwivedi and Lakshmanan, Agnikarma: A Reference Manual for Ayurvedic Physicians - Information Directly Extracted from Approximately 3000 Years Old Literature, Ayurvedic, VRI Press, Vedic Research, Inc. USA, Volume 2, Issue 2, November 2015, p.19-28
18. Kaviraja Ambikadutta Shastri, Sushruta samhita of Sushrut, Part I, Sutrasthana, Adhyaya-13, Jalukavacharaniya , Chaukhmbha Sanskrita Sansthan, Varanasi, Reprint 2012, p. 56-61
19. Zipser B. Identification of specific leech neurones immunoreactive to enkephalin. Nature, 1980; 283: 857-8.
20. Dwivedi Amarprakash P. & Chaugule Pradnya D.: Pain Management Through Ayurveda: A Meticulous Review, IAMJ: Volume 2, Issue 4, April-May, 2018
21. Amar P. Dwivedi, Anaya Pathrikar, Anjna Kulkarni. Review of Concept of Pain Management in Ayurveda. International Journal of Research in AYUSH and Pharmaceutical Sciences, 2017;1(4):168-171.