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# A REVIEW ON PHYSIOLOGY OF PAIN AND ITS MANAGEMENT THROUGH AYURVEDA

Dr. Shilpa Kantilal Ingle\*1 and Dr. R. S. Dhimdhime2

<sup>1</sup>Assistant Professor, Kriya Sharir Dept. Government Ayurved College, Osmanabad. (M.S.) India. <sup>2</sup>Professor & H.O.D. Kriya Sharir Dept. Government Ayurved College, Osmanabad. (M.S.) India.

\*Corresponding Author: Dr. Shilpa Kantilal Ingle

Assistant Professor, Kriya Sharir Dept. Government Ayurved College, Osmanabad. (M.S.) India.

Email ID: drskingle79@rediffmail.com,

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#### **ABSTRACT**

Pain is one of the most complicated but poorly understood topic as it is only subjective. It is a signal that something is wrong and described as an unpleasant, sensory experience at emotional level. Entire spectrum of any kind of pain behaviour is related with patient's attitude, thoughts, expectations. Several investigative tests and laboratory tests are available at present to find out the cause of pain but till today the intensity of pain is not measurable as it is very subjective. According to *Ayurveda Vata Dosha* is mainly responsible for generating and spreading the pain. But beauty of *Ayurveda* has in itself which can pacify the imbalanced *Doshas* with various therapies. Worldwide it is a silent epidemic including joint pain, muscle pain, acute pain, chronic pain etc. Acute pain is physiological response which gives alarming sign of danger and hence it has a biologically important protective function. But still if the pain is neglected may be worse and lead to death.

**KEYWORDS:** Vata Dosha, pain, Panchkarma.

## INTRODUCTION

Pain is one of the most complicated and unfortunately poorly understood topic in medicine as it is only subjective and having no objective assessment. The word pain is derived from the Greek word 'Pone' meaning penalty. In 1979, it is described as an unpleasant, sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.<sup>[1]</sup> It is a signal that something is wrong and act as a safety device for protective function. The early philosopher recognised disease as calor (heat), ruber (redness), tumour (swelling) and dolor (pain). Before 19th century, on a few occasions- the above stated heat, redness and swelling could disappear but the pain continued and didn't respond to any modalities. This led to the chronic pain syndrome which included depression, dependency, disability, drug misuse, drug abuse and doctor shopping. Over the years, scientists modified and indentified new surgical techniques that interrupt the pain pathways and relieve pain. [2] Today pain medicine is a broad sub-speciality, availability of improvised techniques like intra -spinal and trans-dermal opoid delivery systems, patient control analgesia (PCA), implantable spinal cord stimulation etc. Ayurveda states that imbalance among body humors Vata, Pitta and Kapha with aggravation of Vata causes pain. Vata alone or with two others can alter the intensity and type of pain. It is a symptom of physical as well as mental hurt. In Ayurveda pain is named as Shoola Roga. It may

appear as a symptom or as a complication of disease and may again induce distress.

#### AIM

To study the physiology of pain with *Ayurvedic* as well as modern aspect through *Ayurvedic* science.

# **OBJECTIVES**

- 1. To understand physiology of pain with *Ayurvedic* and modern aspect.
- 2. To review *Ayurvedic* management of pain.

### MATERIAL AND METHODS

Textual references are from *Ayurvedic* classics, modern texts, journals and websites are also referred and logical analysis has been done.

## REVIEW OF LITERATURE Modern Aspect

According to Dr. Scott Fishman, California, Davis, pain is a 'symphony' –a complex dynamic involving not only pain sensors but emotions, memory and hormones. [3] although 'pain' is very painful it is a natural tool to defend or to protect. so in its most basic and acute form, pain can be a force for good. Once your tongue is burned with a sip of hot coffee, you will slow down, you may think it would be nice to never feel such pain again. But more than this it is dangerous for the people with the rare condition called congenital analgesia with no innate pain sensors, they live with struggling to survive cuts, burns

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etc. Most die of them, young, from injuries or infections that flourish in joint tissue destroyed by repetitive damage some of the pain has no definite cause but may worsen the livelihood such as pain of rheumatoid arthritis, cancer, mysterious nerve damage. Nobody except the sufferer can describe its intensity.

Types of pain- Pain can be classified according to its onset as-

- 1. Acute pain, Recurrent pain, Chronic pain as well as according to its site like Somatic pain, Visceral (Splanchnic) pain, Referred pain.
- 2. It can be presented as throbbing pain, muscular pain.

Physiology of pain- It is a need of time to understand the anatomy and physiology of pain. The threshold of pain is affected by psychological and physiological factors. The pain pathway consists of a. Peripheral structures b. Autonomic nervous system c. Central structures. Whenever pain stimulus reaches the brain, signals are sent back to the spinal cord by brain itself via a very complex nerve connections. Through this process the brain puts a brake on the pain impulse via pain pathways as it enters the spinal cord. To understand this, the

nocicep-tive signal pathways from sensory receptors to the brain should be followed.

#### **Ayurvedic Aspect**

1. Causes of pain- pain can develop due to any kind of unconscious habits like not breathing properly, suppressing emotions, tensing the muscles, eating refined and over processed food as a routine drinking excess or too less water at improper time, taking too much caffeine content which ultimately causes imbalance in *Tridoshas*.

#### 2. Involvement of Doshas in pain -

In Ayurveda, the origin of pain is through vitiated Doshas specially Vata, along with Pitta and sometimes may be associated with Kapha which can alter the type and intensity of the pain. One of the false belief related about Ayurveda is that Ayurveda can not deal with acute or emergency pain management but actually Ayurveda has a wonder management of pain through Snehan, Swedan, various types of Basti therapy ,Agnikarma, blood letting through Leech therapy, Viddha karma and also through application of paste of herbs i.e. Lepa on affected part of body. As, the pain itself is a very broad domain so while treating pain the treatment is also classified as external and internal.

3. Categories of pain<sup>[4]</sup>

Dosha Type	Characteristics of pain
Vata	Sharp, throbbing, moves from one location to other, have varied intensity, manifests quickly, resolves quickly, tends to be localized on the surface of skin.
Vata-Pitta	Burning, intense, lancing, remains in one place, intensity is at peak in either midnight or midday, tends to be localized in the middle of the day.
Vata-Kapha	Dull, remains at one place, can lasts for several days, the intensity is at peak level at either in the morning or in the evening, the pain is localized deep within the body.

## Ayurvedic management

1. Through relieving stress-

By massage therapy, tonics which are natural stress-relievers. They also proote physical well-being by balancing a harmony between the mind and the body.

Massage helps to reduce pain by taming *Vata Dosha*, allays the joints and muscles stiffness. It also increases blood circulation, mobilizes the toxins and relaxes body and hence mind also. <sup>[5]</sup>

- 2. Pain is approached through a phenomenon called self efficacy. Our brain contains some chemicals which may be triggered mentally, so the pain relief has been proved with significant proportion of people with placebo lasting the effect up to 2 years. So the self-efficacy is more powerful and more long-lasting. *Ayurveda* recognized this power of mind to relieve the pain, strengthen this force through yoga practices.
- 3. The *Ayurvedic* components of lifestyle- also helps to relieve pain at much extent. The positive relationship, nurturing emotions and balance among activities, rest and diet can relieve pain. It helps to rebalance *Tridoshas*, strengthen the mind-body variables and helps to lower the pain sensitivity. Even the human touch and love can

also lessen the pain and the studies has showed the 20 second hug can also relieve pain and stress by acting on nerve cells to release pain-relieving brain chemicals such as oxytocin and reduce the release of the cortisols like stress hormones.

# DISCUSSION

As pain is an unpleasant sensory experience of an individual at emotional level. It is not measurable and also difficult to assess as it has complex multidimensional events and person-to-person variations. Entire spectrum of any kind of pain behaviour is related with patient's attitude, thought, expectations etc. So the non-pharmacological treatments and alternatives modalities also has a major positive results in pain management including folk medicine, acupuncture, acupressure analgesia and at last but not least yoga and meditation. Several investigative test and laboratory tests are available at present to find out the cause of pain but till today the intensity of pain is not measurable so is very subjective.

## CONCLUSION

Though the pain is actual painful but is one of the protective phenomenon occurring in live body as it

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restricts mobility and help healing of the tissues. From the critical review of pain and different modalities to treat pain the following conclusions can be drawn-

- 1. Though pain has such important role of protection, its long duration and more intensity result in an adverse outcome even like morbidity or mortality.
- 2. The vicious cycle of pain from fear or helplessness to lack of sleep causing anxiety to again increase in pain, if not broken for several days or weeks, it sets anger and depression in patients.
- The management of various types of pain include oral and injectable medicines, local anaesthetics, peripheral nerve blocks and some nonpharmacological modalities also like mind-body techniques.
- 4. In *Ayurveda*, the pain is best managed with *Abhyang*, *Snehan*, *Swedan*, *Shirodhara* and other techniques including *Panchkarma*.

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