

## **Dukha (Pain) As Interpreted In Medical Terminology With Special Reference To Indian Philosophy**

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*Abstract: Indian philosophy is fascinating world since long past due to its scientific approach as alterations are well marked philosophically in Ayurveda too. Dukha, part of everyone's life is classified in absorbing manner in Sankhya darshana in Adhyatmika, Adhibhautika and Adhidaivika. Its correlation with concepts of tridosha and pain mentioned under modern medical science is engrossing. Critical observations of these concepts with philosophical approach gives better options to undersatnd the Dukha. Complete cessation from Dukha is only possible through liberation.*

**Keywords:** Indian philosophy, Dukha, Adhyatmik, Adhibhautik, Adhidaivika, Tridosha, Pain.....

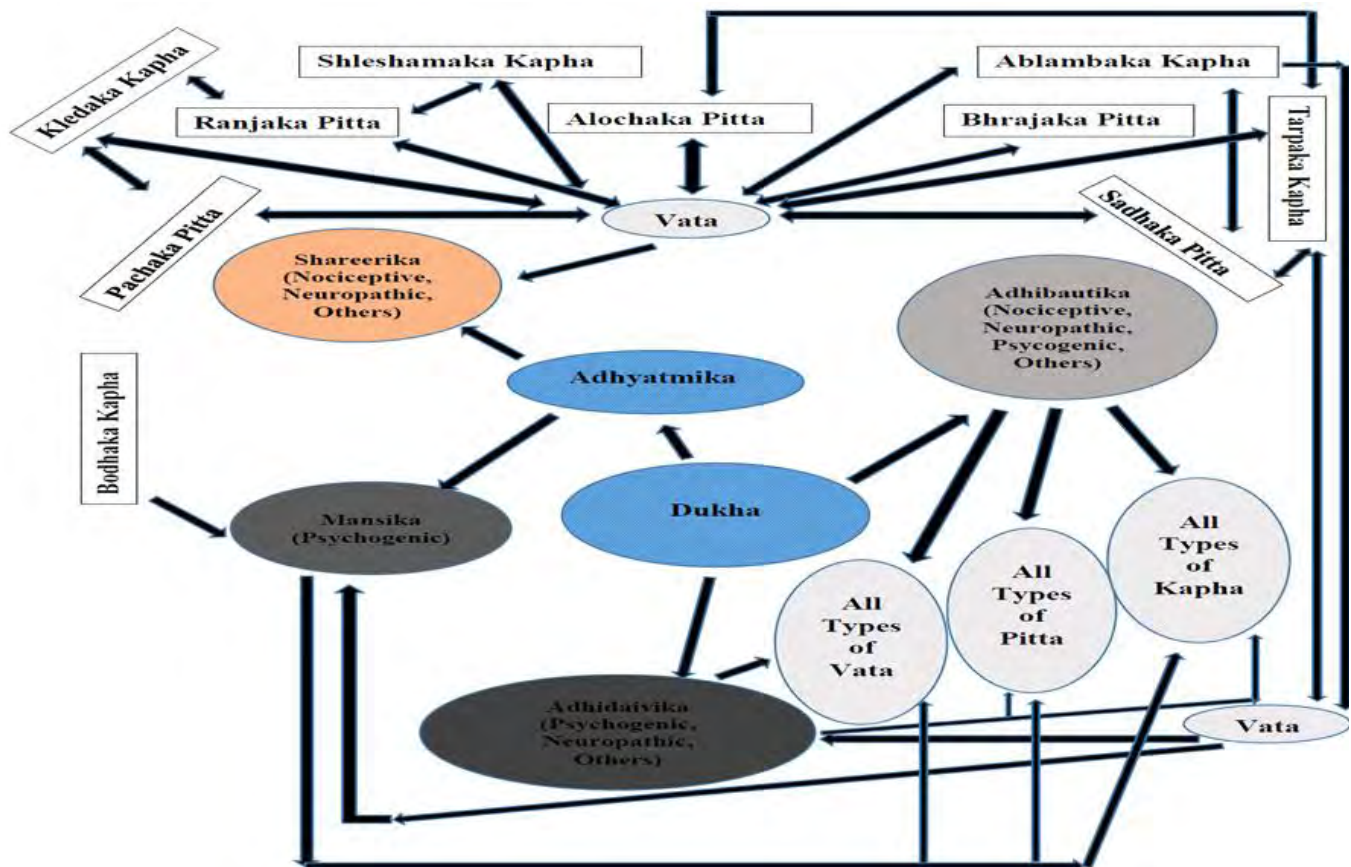
It is very interesting to deal with a general term 'Dukha' which is used by general people to express their miseries of life. Ayurved, a science of life, does not deal with the miseries of life alone, but deal with the causes of miseries too which create diseases (vyadhi) in human beings. Our great ancient philosophers as well as Maharshis of Ayurvedic science have beautifully explained the relationship of 'Dukha' with vyadhi (disease). This aspect of Ayurveda has placed this ancient medical science at the top of all medical sciences prevalent even today. Scholars admit that no medical science in the world can match Ayurvedic medical science in terms of philosophical aspect of the disease. Almost all the Ayurvedic classics have dealt with the concept of Dukha and have used different words for its explanation. Charak Samhita has used the word 'Ruk' for 'Roga' which has also the same meaning<sup>1</sup>. Emphasizing the word 'Dukha', it says in Vimanasthan that Dukha is the root cause of disease<sup>2</sup>. In other words, Dukha means grief or trouble. Any disease troubles the body or mind by producing grief or pain. In fact, Dukha is the synonym of vyadhi. It causes troubles, pain and grief of various types in the body and mind. In philosophy, Dukha means sorrow, lamentation grief, despair and illness. In Buddhism, the word Dukha of painful experiences includes the physical and mental sufferings of birth aging, illness, dying and distress from what is not desirable.

*Dukha*, a word, a concept or perception of mind is common for everyone at one or another stage of life. It is pain causing discomfort originated from *Rajas*<sup>3</sup>. Even *Charak Samhita Sutrasthana* 1/57 also holds *Rajas* and *Tamas* as pathogenic factors of mind (mental function)<sup>4</sup>. English word for *Dukha* is more close to pain than sadness, grief or sorrow. *International Association For The Study of Pain* (IASP) has defined pain as, 'an unpleasant sensory and emotional experiences associated with actual or potential tissue damage, or described in terms of such damage<sup>5</sup>'. It's completely subjective, means individuals' experience of intensity of pain differ. It is associated with brain's respond to condition or as outcome of mental function as result of various neurochemical changes. It is psychological state of mind resulted from pathophysiological causes. Online medical dictionary by Farlex defines pain as, 'unpleasant feeling that that is conveyed to the brain by sensory neurons. The discomfort signals actual or potential injury to the body. It is more than sensation. It includes perception which gives information on the pain's location, intensity, something about its nature. The various conscious and unconscious responses to both sensation and perception includes emotional response'<sup>6</sup>.

Indian philosophy explains pain inseparable from human being and writes that complete cessation of pain is only possible with end of life<sup>7</sup>. However, *Srimad Bhagwadgeeta* 6/20-23 commends with possibility of relief from pain through Yoga. It is said that concentration of mind may achieve purified intellect which transcends the senses and brings the real state. This real state is not moved even by deep sorrow. That induces a state of severance from the contact of pain<sup>8</sup>. Pain is related with Vata in Ayurveda as Vata is considered important for pain as it is related with movement and, therefore, carries the information to and away from the brain. Imbalance in vata also causes pain as conduction of impulses come to disequilibrium. Even disequilibrium of specific type of pitta and kapha also give rise to individual vata and thus, affect processing of nerve conduction. So, apprehension of concept of pain as per tridosha theory and modern classification is important.

**Tridosha Concept of Pain (Figure: 1):** The concept of pain relevant to tridosha theory is briefly mentioned here as Pachaka pitta abodes in stomach and intestine and is responsible for digestion. Its imbalance leads to indigestion, constipation, burning sensation. This brings the disequilibrium in either of samana vayu, apana vayu or vyana vayu or altogether variations come to noted vata. Any of these is responsible for generation of Dukha.

Figure Number: 1: A Schematic Diagram of Interrelationship between Dukha, Tridosha and Specific Pain



Ranjaka pitta is present in liver and spleen and colors the annasara means is involved with metabolism in production and maintenance of blood through the process of ethrythropoiesis. Imbalance in such pitta or its pathological manifestation includes aggravation of samana vayu, apana bayu and vyana vayu and they lead to Dukha.

Sadhaka pitta is present in brain and heart and is responsible for memory, vision and understanding. Disequilibrium brings lack of concentration, sense of helplessness, sleep problems etc. The abnormality leads to aggravation udana vaya, prana vayu and vyana vayu which ultimately lead to Dukha.

Alochaka pitta reigns in eyes and is related with dilation and contraction of pupil and clarity of vision and its perception. Problems are related with eye problems. It leads to Dukha through vyana vayu.

Bhrajaka pitta exists in skin and brings luster. It helps in biochemical reaction within the skin. Imbalance in this type pitta aggravates vyana vayu leading to Dukha.

Kledaka kapha is present along the mucosal lining of gastrointestinal tract and provides protection from acidic secretion as well as moistens the ingested food in stomach. Any imbalance in keldaka kapha may aggravate pachaka and ranjaka pitta leading to aggravation of samana vayu or apana vayu or vyana vayu or all (in adverse cases). Even problems with mentioned pitta and vayu may also invite imbalance of kledaka kapha.

Ablambaka kapha resides in chest cavity nourishes the pleural of the lungs and pericardium of heart by providing smooth muscular tone needed for proper functioning of both. Imbalance may bring problems with oxygen and blood supply related problem to brain leading to abnormality in sadhaka pitta, udana vaya, prana vayu and vyana vayu. Vice-versa effects can also be seen.

Bodhaka kapha is located in form of saliva to keep the oral cavity moist, lubricated and feeling of taste. It also works in primary digestion process. Disequilibrium in this kapha may invite problems of pachaka pitta, udana vaya, prana vayu and vyana vayu. Imbalance of udana vayu or prana vayu may also lead to abnormality of bodhaka kapha by affecting sensation.

Tarpaka kapha is present in brain providing nourishment and protection to the brain. It is also present with myelinated nerves in forms of myelin sheath. Imbalance brings the problems with sadhaka pitta, udana vaya, prana vayu and vyana vayu through transferring of nerve impulses. Any problem with said pitta and cited vayu may also bring changes in equilibria of tarpaka kapha.

Shleshmaka kapha abodes within synovial fluid of the joints, nourishing the articular surface. Abnormality in this type of kapha leads to degenerative process within skeletal system as osteoarthritis or rheumatoid arthritis. Problems of ranjaka pitta and vyana vayu may be originated by imbalance. Even abnormality in ranjaka pitta and vyana vayu may also invite abnormality of shleshmaka kapha.

**Concept of Pain By Modern Medical Science:** A brief concept of pain used in modern medical science is mentioned as:

Nociceptive pain is caused by or responding to pain stimulus following a nociceptive spinal reflex<sup>9</sup>. Two distinct types of afferent nerves are to carry the messages of pain to spinal cord in nociceptive type of pain. A-delta fibers are myelinated fibers and are distributed to skin and muscle. Sharp, sudden and localized pain are mediated by them. Another unmyelinated fibers are C-fibers. They are present in muscle, periosteum, mesentery, peritoneum and viscera. Most nociception from abdominal viscera is conveyed by this type of fiber and tends to be dull, burning, gradual in onset and longer. They involve substance P and calcitonin gene-related peptide neurotransmitters. Stimulation of these fibers activates local regulatory reflexes mediated by enteric nervous system and long spinal reflexes mediated ANS<sup>10</sup>. These fibers open to dorsal root ganglia of spinal afferent nerves and branch in to dorsal horn. The impulses ascend to contralateral spinothalamic tract through these fibers and project to reticular formation nuclei of pons and medulla. Pons send impulses to somatosensory cortex for discriminative aspect of pain while medulla send impulses to limbic system and frontal cortex for emotional aspects of pain<sup>11</sup>.

Neuropathic pain arises from damage or disease of the somatosensory nervous system at peripheral or central level. When nerve cells fail to conduct sensory impulses, the activities happened in nerve in brain cells is interpreted as pain<sup>12,13</sup>. Many causes are responsible for neuropathic pain, mechanical insult being the prime one for damage of neurons or nerves. Others include multiple sclerosis, chemotherapy, diabetic neuropathy, vitamin deficiency, alcoholism etc. Clinically it may be spontaneous pain and stimulus-evoked pain. Burning or intense superimposed shooting pain is taken under spontaneous pain while allodynia (painful sensation of nonpainful stimuli) and hyperalgesia (painful sensation of painful stimuli) are noted under stimulus-evoked pain<sup>14</sup>.

Psychogenic pain refers to symptoms of physical pain having psychological origin<sup>15</sup>. It is also called as psychalgia, pain in the head being of emotional origin and accompanied with intolerable ideas, obsessions or hallucinations<sup>16</sup>. So, it is physical pain associated with psychological factors. It is increased or prolonged by mental or emotional reasons. Anxiety disorder, mood disorder, bipolar disorder, depression, obsessive compulsive behaviour, panic attacks etc. are causes of psychogenic pain. Psychological reasons are behind the intensification of pain<sup>17</sup>.

Miscellaneous type: This type includes nociplastic pain, algopathic pain, centralized pain or maladaptive central processing pain etc. These are pain with etiology of origin different from mentioned classes<sup>18</sup>.

Sankhya darshana has mentioned three types of *Dukha*.

#### **Types of *Dukha* (Pain)<sup>19</sup>**

1. Adhyatmika
2. Adhibhautika
3. Adhidaivika

**1. Adhyatmik *Dukha*:** Adhyatma means related to body and sense faculties<sup>20</sup>. Based on this Adhyatmik *Dukha* are of two types as:

**a. Shareerika:** Such pain is related with disorders in equilibrium of tridosha<sup>21</sup>. This type of pain is connate to physical causes in nature which may occur in any part of body based on external or internal origin of imbalances in tridosha. This situation is originated from imbalance of pitta and kapha leading to vata. All types of pitta and every kapha (except bodhaka) may cause such pain.

Pain due to pachaka pitta and kledaka kapha are related with gastrointestinal tract and such pain perceived through nerves of abdominal viscera. Ranjaka pitta is responsible for metabolism in liver and spleen. Metabolism is also associated with kledaka pitta. Multi-tissue erythropoietin receptor (EPO-R) expression, responsible for erythropoiesis is regulated through nerves<sup>22</sup>. So any problem with conduction of message either due to conduction problem or nerve damage may cause pain. So such pain is either nociceptive or neuropathic type of pain.

Imbalance in sadhaka pitta, ablamabaka kapha and tarpaka kapha causes pain through nerve conduction or

neurochemical changes. Nerve fibers containing the neurotransmitter dopamine play role in prefrontal cortex's circuits of information. It is also responsible processing of information, ideas and sense of well-being. Two distinct receptor sites for dopamine are suggested<sup>23</sup>. Any problem in dopamine containing fiber may bring problems associated sense of helplessness etc. causing pain. So, such pain may be either of nature of nociceptive or neuropathic.

Abnormality in alochaka pitta is related with Dukha due to eye problems. Neurochemicals represent the pitta and neurotransmitters viz., acetylcholine and glutamate are also related with proper functioning of eyes Even any alteration of order of tarpaka kapha may also cause this through optic nerves as optic nerves are covered with myelin<sup>24</sup>. So, problems due to nociception, neuropathy or other reasons may have complete effects on functioning of eyes including nerve related, muscle related or secretion related functioning.

Bhrajaka pitta is widely denoted for enzymes, hormones and other chemicals present with body working for luster of skin e.g., metalloproteinase, zinc protease etc<sup>25</sup>. Any alteration in secretion or release may bring skin related problems. Involvement of nerves are well mentioned for release of these bodily chemicals. So, nociceptive or neuropathic problems may be responsible for bhrajaka pitta related problems.

Taste sensation, lubrication of oral cavities etc. are associated with bodhaka kapha. Trigeminal nerves, gustatory calculi etc. work for sensation of taste<sup>26</sup> whereas for saliva secretion, salivary glands are having cholinergic parasympathetic nerves which releases acetylcholine to release saliva through salivary gland ductal tree and muscarinic receptors<sup>27</sup>.

Good number of physiological alterations leading to Dukha are under shareerika Dukha.

**a. Mansika:** The word 'mansik' indicates the origin from manas or mana or which is born of the mind<sup>28</sup>. Mind or sattva or chetas transcends all sense perceptions by its contact with its objects like happiness, misery etc. and the soul. Its multiple characters are suggested in same individual related to its objects, qualities, experiences etc.<sup>29</sup> Tarpaka kapha if affected, may create problems in sensing related with motor action of nerves while bodhaka kapha in case of imbalance may create problems of taste related perceptions. Imbalance of ablambaka kapha is responsible for less supply of oxygen to brain. This may result cause confusion, decreased concentration, mood swing, poor coordination etc<sup>30</sup>.

Various sets of behavioural alteration viz., kama, krodha, moha, lobha, bhrama etc. brings imbalance in tridosha. They work through either of neurotransmitters e.g., excitatory and inhibitory named after facilitating or impeding action of transmission of messages. They work in calming mind and body, inducing sleep, focusing, motivation etc. Imbalance in secretion may cause schizophrenia, depression, anxiety disorders etc. Pitta gets imbalanced and that leads to abnormality of vata and kapha. Prolonged mansika Dukha may create bigger problems working through nervous system and blood circulation.

**2. Adhibhautika Dukha:** This is type Dukha caused by man, animal, birds, snake etc. External sources bring imbalance in tridosha. This includes all type of pain as injuries and sensation may cause nociceptive, neuropathic and other types of pain. Bearing of problems may bring many of psychological problems including phobia, trauma related anxiety, depression etc. which may be conducive to psychogenic pain.

**3. Adhidaivika Dukha:** Dukha due to supernatural powers are regarded as adhidaivika Dukha. It is said to be originated after effects of rakshasa, yaksha, pishacha etc. Practically it seems to be more related with unknown causes. However, astrological relation is also suggested for vitiation of tridosha as saturn, mercury and rahu are related with vata while sun, mars and ketu represents pitta. Jupiter, moon and venus stands for kapha. Any changes in transitory position, presence in specific houses, under aspect of specific or group of planets leave particular effects on body as mentioned in vedic astrology. The reasons are based on astrological calculations. Even specific angle of planets and their rays also may leave impacts on health<sup>32</sup>.

If somewhere problem exists in conduction of messages, then diagnosis is not easy. It appears only after symptoms get vitiated. Such problems are common in case of imbalance of ablambaka and tarpaka kapha. Number of times, over thinking or unwanted thinking may also create behavioural problems citing the problems of unknown reasons. Such conditions may create imbalance of tridosha as described in psychogenic pain.

**Discussion:** Soul desires cessation of pain and being a guiding force for many of mental function, its behaviour also changes. Physicians, drugs and other measures can only depart the pain, but it remains somewhere in mind. The com

-plete cessation is possible only with liberation as bondage is in core of many of pain. One can make all efforts to maintain his/her mind in normal conditions by performance of duties after complete considering pros and cons with help of intellect. This may help to reduce the pain. Vedic rituals bring happiness<sup>33</sup>. These may help in departing Dukha specifically from mansika or adhidaivika origin. Pain from adhibhautika origin can be prevented only with precaution to avoid the causes. Meditation, mindfulness-based cognitive therapy etc. are proved to work at various neurotransmitter levels and are also helping in mood elevation<sup>34</sup>. So yoga, proper diet regime and disciplined life-style as per mentioned in Ayurveda may be helpful to resist many of shareerika Dukha. Adhidaivika Dukha is ascribed to supernatural power. Sound-waves' alterations through mantra or other available techniques or by using gems to absorb or resist specific planet's rays is practiced since long to pacify adhidaivika Dukha. So, a better understanding of situation and causes of Dukha, may help anyone to reduce many of these Dukha.

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