Review Article

An exploration of Unani concept of pain with conventional medicine

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The intention of medicine is to preserve and restore health and relieve suffering. Understanding pain is essential to achieving any one of these goals. It is an irrefutable fact that every individual experiences pain in his/her life. Likewise, it is one of the most common manifestations that a physician encounters in his/her career. Pain can arise either as a consequence of physical events or as a result of a psychological process. Aristotle, who associated pain with sensation, observed that where there is a sensation, there is pleasure and pain too. Moreover, apparently, he regarded pain as a qualifying sensation. Relevant literary material for this paper was collected from classical Unani literature as well as modern medicine. Then available literary material was analyzed and organized systematically. Thus, pain makes sufferers as well as physicians aware to protect the body from diseases and maintain health. Furthermore, there is a great relationship between pain and psychological state. This review article is aimed to provide a breeding ground for reflection on the concept of pain according to the Unani system of medicine and to encourage the identification of a meaningful aspect of this complex condition.

KEY WORDS: Alam, concept of pain, Ibn-e-Sina, Unani system of medicine, waja

INTRODUCTION

Pain teaches humankind the value of life, no pain, no gain. Persistent pain can affect quality of life by impairing general physical function, but once it is overcome, this blessed life can lead to a wonderful life. The attempt to understand pain represents one of the oldest challenges in the history of medicine. It's no surprise pain is something that everyone has experienced. However, recognition of pain as a pathologic entity remains debatable to date. Remarkably pain is the most common symptom of any disorder in the body. Nevertheless, perception of pain is quite complex and varies from individual to individual.

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It is considered as not only an emotion, a feeling but also a sense without which an individual's emotional and social life cannot be imagined.

HISTORICAL BACKGROUND OF PAIN

Since time immemorial humans are struggling to understand the etiology and mechanism of pain. However, it has always been believed that the expression "painful" can be used to describe an emotion as well as a conscious experience associated with bodily injury or disease. In the earliest theories, the origin of pain was considered to be caused by demonic possession or invasion of the human body by magic fluids or evil spirits, etc. Therefore, the treatment of pain was consisted of warding off or frightening away by extracting these invading entities/evil spirits through amulets and some magic rituals which were mainly performed by shamans and sorcerers.[1] In ancient cultures, people believed that pain other than injury-related was caused by religious influences of their Gods or spirits of death as well. In view of that, it is mentioned in the papyri that in some parts of the Egypt

vomiting, sneezing, and urinating were considered as routes of departure for these evil spirits and demons. Even craniotomy was used for trepanation to permit the escape of evil air.[2]

In the next few centuries, scholars started considering pain a sensation or feeling; hence, they were trying to explain whether the brain or heart is the center of sensation/feeling. In view of this Aristotle (384–322 BC) considered the heart to be the seat of feelings/sensation, whereas Alcmaion of Crotona, a disciple of Pythagoras (566–497BC), believed that the brain was the center of sensation.[1] Centuries later, Galen (AD 130–201), a great physician of Alexandria, considered the brain as the organ of feeling/sensation. Likewise, Avicenna (AD 980–1037) considered the brain as a center of sensation. On the other hand, he has clearly associated emotions with the heart. He also noted that, in disease, pain can dissociate from touch or temperature recognition and proposed pain to be an independent sensation.[3-5]

Moreover, in the 19th century, afferent pathways for somatic senses were explained. Not just this, how different information from the body is transmitted to and from the spinal cord and brain is also elucidated.[6] Furthermore, Schiff proposes pain to be a specific sense in 1858 and Erb put forward an intensive theory of pain in 1874.[7,8] Subsequently, in 1878, Gowers reports dissociation of pain from touch after a spinal cord lesion in a human.[9] In 1906, Sherrington proposes a definition of pain-causing stimuli as tissue-damaging (noxious).[10] Following this, Spiller and Martin use ventrolateral spinal chordotomy in 1912 for the relief of pain in humans.[11] Of late, in 2003, Craig proposes pain as a homeostatic emotion.[12]

DEFINITION

The term pain comes from the Latin word "POENA," this means penance/punishment from God.[13] The Unani system of medicine (USM) is based on teachings of Greco-Arab philosophers and physicians such as Hippocrates, Galen, Razes, and Avicenna. In the Hippocratic collection, three different words were used to denote pain, that is, "algos," "ponos," and "odyne." Correspondingly, many derivatives of these three words such as algema, alredon, odynema, and odyneros were used for various painful expressions too.[14] Later, the Unani physicians of Arabic period addressed pain as waja and alam. Waja means pain, ache, agony, and suffering.[15] Moreover, Alam, in USM, is a broader term, which means unpleasant sensation arising from any sense/all senses.[16]

In the USM, Pain is defined as an abnormal perception felt by an individual which denotes the morbid condition of the body. Whereas pleasure is the perception felt by an individual which is opposite to pain. In a nutshell, an unpleasant perception/feeling is known as pain, whereas a pleasant perception/feeling is known as pleasure or joy. In modern medicine, Sherrington's defined pain as "the physical adjunct of an imperative, protective reflex" and the description of its neurophysiological aspects. Two added to this the international association for the study of pain founded, in 1973, defines pain as "unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage."[17]

UNDERSTANDING OF WAJA AND ALAM (PAIN) IN UNANI SYSTEM MEDICINE

According to the USM, to comprehend suffering, one must be familiar with the concept of Tabiat (nature/physis) as well as Quwwat-e-Nafsaniyah. Tabiat is an administrative faculty that governs the human body involuntarily and unconsciously.[18] It is also where all motions and rests originate.[17] For administrative governance, tabiat operates through various faculties (Quwwat-e- ṭabī'iyya/vegetative faculty, Quwwat-e-haiwāniyya/vital faculty and quwwat-i-, quwwat-i-, and quwwat-i- Quwwat-e- nafsāniyya/mental faculty).[16] Quwwat-i- ṭabī'iyya is concerned with nutrition, growth, reproduction, and elimination of waste. It helps in the preservation of individual as well as of species. Quwwat-i-haiwāniyya (vital faculty) is responsible for tadābīr of rūḥ, which brings life to the part it supplies. Qalb is the source organ of this faculty.[15,19]

Quwwat-e-Nafsaniya performs sensory, motor, and intellectual functions in the body. It is the faculty, which comprises perception and locomotion. The brain, spinal cord, nerves, and alat-e-hawas (external sensory organs) are called aaza-e-nafsaniya (organs of nervous sytem) as they are pertaining to these divisions. The center of quwwat-e-Nafsaniya (psychic/mental faculty) is the brain. Added to this quwwat-e-Nafsaniya consists of two groups of faculties: Quwwāt Mudrika (perceptive faculty) and Quwwā Muḥarrika (motive/locomotive faculty). The perceptive faculty is concerned with sensation, whereas motor faculty is that which contracts and relaxes the tendons, through which the muscles, organs, and joints prolong and contract.[20]

Quwwat-e-Mudrika (perceptive/cognitive faculties):

As it is the faculty of perception or sensation to collect all kinds of sensory stimuli from different sensory receptors (mudrikat) then convey them to their pertinent centers present in the brain.[21,22] It is of two types, namely, Quwae mudarikah zahira (external perceptive faculty) and Quwae mudarikah batina (internal perceptive faculty). Both these faculties are further divided into five subtypes as mentioned in the table below[15,16,20-23] Table 1.

Pain is a sensory or emotional experience that is unpleasant. It is the polar opposite of happiness/pleasure. Moreover, it is true that human conduct is driven by one of two fundamental motivations: the avoidance of pain or the pursuit of pleasure. Lazzat (pleasure) is an abrupt/sudden feeling that is favorable to tabiat (physis/nature). On contrary to this, waja (pain) is an abrupt/sudden sensation or feeling that is unfavorable to tabiat.[24] The "condition" of suddenness is mandatory in the feeling of pain and pleasure because any gradual change in the body is not noticed by the body; in other words, the body becomes habitual to the changes that are occurring slowly.[15,16]

Table 1: Quwwat-e-Mudrika (perceptive/cognitive faculties)

S. No.	Subtypes of Quwwat-e-Mudrikah (perceptive/cognitive faculties)	
	***Quwā Mudrika zahira* (external perceptive faculty)**	***Quwā Mudrika batina* (internal perceptive faculty)**
1.	*Q Bāṣira* (faculty of vision)	*Ḥiss Mushtarak* (integrative sense)
2.	*Q Sāmi`a* (faculty of hearing)	*Q Mutakhayyala* (faculty of imagination)
3.	*Q Shāmma* (faculty of smell)	*Q Mutaṣarrifa* (faculty of justification)
4.	*Q Dhā'iqa* (faculty of taste)	*Q Wāhima* (faculty of apprehension)
5.	*Q Lāmisa* (faculty of touch)	*Q Ḥafiẓa* (faculty of memory)

WAJA AND ALAM

There are two terms waja and alam for pain in USM, but the usage of these terms is different. So far as, the application of these words is concerned that Alam is a broader term as it applies to unfavorable/unpleasant sensations related to any one of the five external sensations except touch, for example, hearing something that is unpleasant to the ear causes alam in quwwat-e-samia, seeing something that is not pleasant to eyes causes alam in quwwat-e-basira, etc. However, the term waja is strictly applied to unpleasant sensations related to touch only.[15,16]

CAUSES OF PAIN

In the USM, there are two causes of pain; sue mizaj mukhtalif and tafarruq e ittisal.

a. Tafarruq-e-ittesal: In tafarruq-e-ittesal continuity of the organ is disturbed as a result structure of the organgets disrupted.[19,20]
b. Sue mizaj mukhtalif: It is an abnormal temperament that occurs abruptly. It is distinct from the normal temperament of organs which dominate the actual temperament resulting in (Ahsas e manfi) unpleasant perception, that is, pain.[20]

Contrary to sue mizaj mukhtalif, sue mizaj mustavi (the abnormal temperament which is regular and persistent) does not cause pain, because it gets so integrated into the tissues that it becomes natural to the person. A condition that is thus of an integral nature is not felt as pain unless it departs from the pre-existing condition.[15,16]

Avicenna postulated that any sudden change in the temperament (Sue mizaj mukhtalif) or/and breach in continuity (tafarruq-e-ittesal) affect the physical condition of any organ leading to pain. Majority of the ancient Unani physicians testify to his view. However according to Galenic theory, the chief cause of pain is breach in continuity only, which interferes with the nature of organs.[15,25,26]

According to philosophy of USM, there are four basic qualities (kaifiyat arba), that is, Hararat (hotness), burudat (coldness), rutubat (moistness), and yabusat (dryness).[27] Imbalances of hotness and coldness are direct stimuli of pain, whereas dryness acts indirectly but moistness never at all. The reason is that the former two qualities (hotness and coldness) are active, while the latter two (dryness and moistness) are passive. Abnormal Hararat (hotness) results in tafreeque (differentiation/dispersion) in structures of an organ. Alongside hotness produces congestion and causes tension which increases the pain as well, whereas abnormal burudat (coldness) results in constriction in the organ or part of the organ at the site of barudat and causes differentiation in surrounding structures.[16] Hence, the coldness produces pain not only over the part to which it is applied but also in the adjoining area which becomes shrunken and retracted. In other words, pain is felt everywhere although the loss of continuity occurred only in the area near the one to which the coldness had been actually applied. Dryness produces pain indirectly by causing loss of continuity by constricting thus unable to influence other objects except by making them more or less responsive.[16]

In a nutshell according to Galen (Jalinus), tafarruq-e-ittesal, that is, breach in the continuity of tissues or organs is the dogmatic cause of pain, whereas according to Avicenna (Ibn Sina), cause of pain is sue mizaj mukhtalif and tafarruq-e-ittesal both.[15,16]

EFFECTS OF PAIN

Pain can occur due to any unnatural situation or injury. Initially, it causes hotness or warmth in the affected organ due to an increase in the supply of blood and rooh/pneuma. Congestion can also occur. However, as a result of the pain, the organ gradually turns cold due to dissolution of the rooh and ḥarārat gharīzyya. Pain by any cause and in any part of body results in tahleel-e-quwa(weakness of faculty) and the dissolution of tahleel jauhar-e-rooh(essence of pneuma). Therefore, organs fail to perform their functions and the body gets disturbed; hence, they fail to work normally.[15,16,25]

TYPES OF PAINS

Type of pain can be diagnosed by its onset, location, severity, aggravating and relieving factors, transformation, tenderness, and guarding, and its classification depends on nature, site, duration, progress, aggravating, relieving factors, etc. There are 15 types of pain given by Ibn Sina.[15,16] He elaborated on previously described types of pain by Jalinus.[16,27] Some of these terms are remarkably similar to those used in McGill Questionnaire.[15,28] Different types of pain according to the USM, their conventional terms, causes, and diseases, in which these types of pain can be seen are illustrated in table below Table 2.

CHARACTERISTICS OF PAIN (SOCRATES)

The above-mentioned types of pain described by Unani physicians show site, character, nature of pain, etc. Similarly, various characteristics of pain such as site, onset, character, radiation,

Table 2: Types of pain

Types of pain				
S. No.	**Type of pain (Acc. to Galen and Avicenna)**	**Conventional term (Acc. to McGill Questionnaire)**	**Causes**	**Diseases/Condition**
1.	*Waja' Hakkak*	Pruritic pain	Salty and pungent humour	Skin diseases
2.	*Waja' Nakhis*	Pricking pain	The morbid matter that is capable of producing distension and hardness in the organs	Inflamed membranes (Pleurisy)
3.	*Waja' Khadri*	Neuropathic pain	Obstruction in the pathway of nerves due to coldness and congestion leads to heaviness	Compression of nerves
4.	*Waja' Misalli*	Stabbing pain	Accumulation of morbid matter within the parenchyma of the organ	Diseases of colon
5	*Waja' Saquib*	Perforation pain	Stretching of layers of the organs is caused by the accumulation of viscous humour or pneuma	Diseases of colon
6.	*Waja' Mumaddid*	Distension pain	Collection of Morbid matter or riyah/pneuma in the hollow organ	Stomach flatus
7.	*Waja' Zarbani*	Throbbing pain	Due to the pulsation of an artery present next to the inflamed organ	Acute inflammation of sensitive organ, Migraine
8.	*Waja' Laazeh*	Irritant pain	Morbid matter of irritant nature	Heart burn
9.	*Waja' Zaghit*	Compression pain	The pressure exerted by accumulated humour or pneuma	Heart pain
10.	*Waja' Khashin*	Rough/Coarse pain	Viscid humour	Psoriasis
11.	*Waja' Rakhu*	Dull ache	Accumulation of humour in the muscular part	Pain in soft tissue of muscle
12.	*Waja' Ayayi*	Fatigue pain	Exertion or stretching by morbid matter or Riyah	Body ache
13.	*Waja' Saqeel*	Heavy pain	Inflammation in insensitive organ	Hepatic and splenic pain
14.	*Waja' Mufassikh*	Incisive pain	Morbid matter which creates disruption and differentiation in components of muscle fibers making them distended	Muscular pain
15.	*Waja' Mukassir*	Bony pain	Accumulated gaseous/morbid matter in between bone and periosteum	Fractures

associated symptoms, timing (duration, course and pattern), exacerbating and relieving factors, and severity (SOCRATES) are described in modern medicine. They play an important role in identification of pain. Speed of onset and any associated circumstances also give an important clue. Character of pain is described by adjectives such as sharp/dull, burning/tingling, boring/stabbing, and crushing/tugging. It is recognized preferably using the patient's own description. Pain radiates sometimes through local extension and at times referred by a shared neuronal pathway to a distant unaffected site, for example, diaphragmatic pain at the shoulder tip through the phrenic nerve (C3, C4). Symptoms such as visual aura, numbness, and a burning sensation are repeatedly associated with pain. Visual aura accompanies migraine with aura, numbness in the leg with back pain suggesting nerve root irritation. Pain can be temporary or continuous, depending on its duration or pattern. Exacerbating and relieving factors influence intensity of pain. Eating aggravates the pain of gastric ulcers, but relieves the pain of duodenal ulcers. Severity of pain sometimes helps to compare different types of common pains.[29]

DISCUSSION AND CONCLUSION

The endeavor to apprehend pain embodies one of the oldest challenges in the history of medicine. It is well known that pain as a symptom plays a valuable role in medicine. Therefore, pain acts as a valuable and significant tool. An important concept regarding identification of pain, their causes, and types are given by Unani physicians such as Galen and Avicenna. So far as, definition of pain is concerned, the recognition of pain as a disease remains debated. Furthermore, the pain can be described as an unpleasant sensory or emotional experience. It is the opposite of joy/pleasure. Likewise a key step forward in the scientific characterization of pain and the description of its neurophysiological aspects is taken with the Sherrington's definition of the phenomenon. In modern medicine, causes and mechanism of pain are described by center for pain sensation, pathways of pain sensation, pain receptors, and stimulation that cause pain [may be mechanical, thermal (tafarruq-e-ittesal) and chemicals released in tissue injury, for example, Bradykinin, Serotonin, Histamine, Potassium ions, Acetylcholine, and Proteolytic enzymes (morbid matter)]. Almost similar causes have been described in the USM, but the way of explanation is different. Such as in the USM madda is involved in sue mizaj maddi, this madda may be a chemical mediator described above. So far as, types of pain are concerned, most common term used is somatic pain. There are two types of somatic pain, one is superficial felt over skin and another is deep pain which arises from muscle, bone, and ligament. Waja` Hakak (pruritic pain) is an example of superficial somatic pain, while Waja`

Mufassikh (muscular pain) and Waja` Rakho (dull pain) are of deep somatic pain. Moreover, some other terms are also defined as muscle ache and soft-tissue pain in modern medicine. Muscle ache includes the pain of ligament, tendon, and fascia and soft-tissue pain comprises the pain of bursitis and tendinitis.[3,30,31] In the classical Unani literature, Waja' Mufassikh and Waja' Rakhu both are related with muscular pain which is similar with above-mentioned types of pain. Added to this Wajae Saqib and Wajae Missali belong to modern types of the visceral pain which arises from visceras.[29] Neuropathic pain corresponds to Waja' Asabi or Khadri.[32,33] It is due to disturbed pain perception system within the peripheral or central nervous system and associated with paresthesia. However, based on the duration of pain, different types of pain are presently classified as chronic pain and acute pain. Accordingly, different characteristics of pain are described as SOCRATES, namely, site, onset, character, radiation, associated symptoms, timing, exacerbating, and relieving factors and severity. Similar description regarding characteristics of pain has been described in classical Unani literature as well.[29]

This study provides an overview of the various conceptualizations of pain as a disease since its pioneering development, as well as Unani's physicians work to track the history of the ideas and its interpretation. Attempts have been made to create breeding grounds to reflect the concept of pain as a disease and to inspire the identification of a new meaningful definition for this complex condition.

REFERENCES

1. Sabatowski R, Schafer D, Kasper SM, Brunch H, Radbruch L. Pain treatment: A historical overview. Curr Pharm Des 2004;10:701-16.
2. July J, Manninen P, Lai J, Yai Z, Berstein M. The history of awake craniotomy for brain tumor and its spread into Asia. Surg Neurol 2009;71:621-4; discussion 624-5.
3. Dallenbach KM. Pain: History and present status. Am J Psychol 1939;52:331-47.
4. Keele KD. Anatomies of Pain. Springfield, Illinois: Charles C. Thomas; 1957.
5. Gruner OC. A Treatise on the Canon of Medicine of Avicenna, Incorporating a Translation of the First Book. London: Luzac and Co.; 1930.
6. Bell C. Idea of a New Anatomy of the Brain-submitted for the Observations of his Friends. London: Strahan and Preston; 1811.
7. Schiff JM. Lehrbuch der Physiologie des Menschen. Muskel und Nervenphysiologie. Lahr: Schauenberg; 1858. (in German).
8. Erb W. Handbuch der Krankheiten des Nervensystems II. Leipzig: Friedrich Christian Wilhelm Vogel; 1874. (in German).
9. Gowers WR. A case of unilateral gunshot injury to the spinal cord. Trans Clin Lond 1878;11:24-32.
10. Sherrington CS. The Integrative Action of the Nervous System. Cambridge, United Kingdom: Cambridge University Press; 1906.
11. Edinger L. Zwölf Vorlesungen Über den Bau der Nervösen Centralorgane Für Ärzte und Studirende. Leipzig: Friedrich Christian Wilhelm Vogel; 1892. p. 150-3.
12. Craig AD. Pain mechanisms: Labeled lines versus convergence in central processing. Annu Rev Neurosci 2003;26:1-30.
13. Medical Definition of Pain (Internet MedicineNet). Available from: https://www.medicinenet.com/pain/defination.htm [Last accessed on 2021 May 05].
14. Liddell HG, Scott R. A Greek English lexicon. Oxford: Clarendon Press; 1940.
15. Sina I. Alqanoon Fit Tib. English Translation by Jamia Hamdard. Vol. 1. New Delhi: Jamia Hamdard; 1993. p. 176-82, 379-82.
16. Baghdadi IH. Al Mukhtarat Fit Tib-part-1. New Delhi. CCRUM, Ministry of Health and Family Welfare, Government of India; 2004. p. 75-6.
17. Sembulingum K, Sembulingum P. Essential of Medical Physiology. 6th ed. New Delhi: Jaypee Brother Medical Publisher; 2013. p. 838-43.
18. Jilani HG. Makhzan-ul-Jawahar. Vol. 528. New Delhi: Aijaz Publication House; 1998. p. 530-1.
19. Majoosi AH. Kamil-us-Sana'a (Urdu transl. Hkm. G.H. Kantoori). New Delhi: Idara Kitabus Shifa; 2010.
20. Chandpuri K. Mojiz-al-Qunoon. 3rd ed. New Delhi: CCRUM; 1998. p. 15.
21. Azmi HA. Mabadiyat-e-Tibb. 1st ed. New Delhi: Taraqqi Urdu Bureau; 1991.
22. Chugmini S. Qanuncha (Urdu Translation). Deoband: Faisal Publication; 2004. p. 19-20, 23.
23. Ahmed SI. Introduction to Al Umur Al-Tabi'yah. 1st ed. New Delhi: Central Council for Research in Unani Medicine; 2009.
24. Jurjani I. Zakhira Khwarizam Shahi. New Delhi: Idara Kitabus Shifa; 2010.
25. Nafis B. Kulliyat-e-Nafisi. New Delhi: Idara Kitab-us-Shifa; 1954.
26. Rushd AW. Kitab-ul-Kulliyat. New Delhi: CCRUM; 1987.
27. Sina I. Kulliyat-e-Qanoon. Urdu translated by Mohammad Kabeer Uddin. New Delhi: Ejaz Publishing House; 2006. p. 99.
28. Tashani OA, Johnson MI. Avicenna's concept of pain. Libyan J Med 2010;5:5253.
29. Kasper DL, Braunwald E, Fauci AS, Hauser SL, Longo DL, Jameson JL, *et al*. Harrison's Principal of Internal Medicine. 16th ed., Vol. 1. New Delhi: MC Graw Hill Medical publishing; 2008.
30. Glynn M, Drake WM. Hutchinson's Clinical Methods: An Integrated Approach to Clinical Practice. 24th ed. Edinburgh: Elsevier; 2018.
31. Hall JE. Gyton and Hall Textbook of Medical Physiology. 12th ed. United States: Saunders; 2005. p. 558-59.
32. Cassar MP. Handbook of Clinical Massage. 2nd ed. New Delhi, India: Churchill Livingstone; 2004. p. 62-3, 73-91.
33. Colledge NR, Walker BR, Ralston SH. Davidson's Principles and Practice of Medicine. 21st ed. Edinburgh: Churchill Livingstone; 2010. p. 280-3.