

## Clinical Evaluation of Mizaj (Temperament) in patients with cervical spondylosis – A randomised clinical trial

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### Abstract

Cervical spondylosis is a general term used to describe age-related disc deterioration. In addition to the synovium and capsule of the facet joints, the peripheral regions of the disc also include nerve fibers and nociceptive nerve endings. The term “temperament,” or “mizaj,” in Unani medicine refers to the normal biochemical balance of the body’s cells, tissues, organs, and overall structure. A shift from this balance is referred to as a *sue-mizaj*, or temperamental disorder. *Waja ul Mafasil* is brought on by an abnormal alteration in the body’s homeostasis brought on by a temperamental disorder, which might impact the entire body or just the essential organs (*A’azae-Raeesa*).

The purpose of this study is to evaluate the mizaj of patients of cervical spondylosis and to evaluate the role of Mizaj in the patients of cervical spondylosis. It is also necessary to produce clinical evidence to support the assertions made by Unani physicians which are documented in Unani literature.

The study was conducted on 60 patients in the Ilaj Bit Tadbeer department of the AKTC faculty of Unani medicine, AMU Aligarh, between April 2022 and May 2023. For this study, the Central Council for Research in Unani Medicine (CCRUM), a government agency under the Ministry of AYUSH, Government of India, designed a unique questionnaire format that was used to assess each patient’s mizaj (temperament).

After using a specially designed format to assess the Mizaj of patients with cervical spondylosis, the results revealed that, out of the 60 patients involved in the study, the highest number of patients—39 patients, or 65%—had *Balghami Mizaj*. Thus, it is clear that *barid ratab mizaj* (cold and wet temperament) is the predominant mizaj (*Phlegmatic disease*) associated with cervical spondylosis.

### Keywords

Mizaj, *waja-ul-unq*, Ageing, Cervical spondylosis

## 1. INTRODUCTION

A broad spectrum of degenerative alterations affecting all the parts of the cervical spine, such as the intervertebral disc, facet joints, ligamenta flavum, etc are together referred to as cervical spondylosis (Boon *et.al*, 2006). The aging process usually starts after their third decade of life. The cervical spine's intervertebral disc and vertebral bodies are affected by the chronic degenerative illness known as cervical spondylosis, which may or may not cause neurological symptoms (Maheswari J, 2002). On radiographic imaging, the majority of persons with spondylitic abnormalities of the cervical spine are asymptomatic. Sign of degenerative changes in 25% of people under the age of 40, 50% of individuals over 40 and 85% people over 60 years of age. The most commonly affected cervical vertebrae are C6 -C7 then C5 – C6 (Duo DT tadi P *et.al*, 2022).

With an incidence of 3.3 instances per 1,000 persons, cervical spondylosis affects 83% of the general population, or one lakh people. According to estimates, more than 50% of individuals annually have some level of neck discomfort, and between 60 to 80 percent of older adults experience neck pain as a result of degenerative changes<sup>1</sup>. After back pain, neck discomfort is the second most prevalent complaint and is a widespread condition. Low back and neck pain is still the leading cause of years lived with disability (YLD) and the fourth largest source of disability adjusted life years (DALYs), according to the 2015 Global Burden of Disease report (Ahmad Abdul Aziz *et.al*, 2021).

Cervical spondylosis is a common age-related disease process associated with degenerative changes in the intervertebral disc.

The main risk factor is the aging-related degradation of the cervical intervertebral discs and other cervical components. Additional risk factors for an accelerated disease course and early onset cervical spondylosis include exposure to severe spinal trauma, ligamentous stiffness, long-term overuse and overload of work, certain sports (such as rugby, soccer, etc.), poor posture, and poor dietary habits.

Cervical spondylosis is caused by a degenerative cascade that compresses neural and vascular systems and causes biochemical changes in the cervical spine. An increase in keratin chondroitin causes the proteoglycan matrix to change, which causes the intervertebral disc to lose water, protein, and mucopolysaccharide. The disc's desiccation causes the nucleus pulposus to become more fibrous and less flexible. As it starts to lose its ability to support weight-bearing loads, the nucleus pulposus herniates. As a result, the cervical spine becomes compressed and the disc height decreases along with the ligamentous laxity. Additional pressure results in significant alterations to the cervical spine that promote reactive bone growth. These osteophytes or bone spurs can develop along the ventral or dorsal margins of cervical spine. These degenerative changes result in loss cervical lordosis and movements (Maheswari J 2002). The end result of these degenerative changes in the cervical spine is that the following sequel may occur as neck pain, cervical radiculopathy and cervical myelopathy.

Clinically the sequel present as pain in the neck, tenderness and stiffness, limited normal range of motion of cervical spine, radiating pain towards arm and hand, numbness and tingling sensation, coordination and gait issues, grip, we-

akness and bowel or bladder dysfunction in advance cases.

The term cervical spondylosis is not as such mentioned in Unani system of medicine. But the neck pain is described as Waja-ul-Unq which is the type of Waja-ul-Mafasil. Waja-ul-Unq has been described as localized form of Waja-ul-Mafasil which is characterized by neck pain and stiffness with or without restricted neck movements (Samar Qandi). Keeping the characteristics presentation in mind cervical spondylosis technically can be termed as “Jasatul Fiqaria Unqi” (Abdul kaif Masihi).

Classical Unani literature states that organismal ageing is caused by two opposing processes: the first is Tahleel-e-rutoobat, which harat-e ghareezia does to keep the organism in a functional state, and the second is Quwwat-e-hazima’s insufficient tahleel compensation, which keeps the organism in a balanced state. Because of this imbalance, there is a drop in hararat-e and rutoobat-e ghareezia, which turns the mizaj into barid yabis. Because quwa needs hararat for affal, a gradual increase in baroodat with age weakens quwa and slows down the body’s affal (Kabeer uddin M., Ibne Abbas majoosi, Tabri R., Azami. AA).

The components of the human body are water, bones, fat, and lean tissue, which includes muscles and organs. The distribution and quantity of these components will alter as we become older. The amount of muscles mass decreases as we older, resulting increase burodat in the body. The musculature fibres contract. Muscle tissue may be replaced by a robust fibrous tissue, but it replaces itself more slowly. Muscles lose some of their tone and contractility as a result of aging-related changes in the nervous system and alterations in muscle tissue.

Age-related muscle atrophy and loss of tone can cause the body to become dry (yabusat). As we age, the water content in tendons—the cord-like structures that join muscles to bones—decreases. The tissues become less flexible and able to withstand stress as a result. Vertebrae are the bones that make up the spine. An intervertebral disc, or gel-like cushion, sits between each bone. As the discs progressively lose fluid and becoming thinner, the trunk gets shorter (Martin GM).

Most of the Unani physician have been clearly explained the pathogenesis of Waja ul Mafasil on the basis of qualitative and quantitative derangement of temperament (mizaj) and humours (akhlat). Therefore Waja-ul-Mafasil could be classified into sada and Maddi on the basis of involvement of Mawade fasida (morbid matter). Waja-ul-Mafasil sada is one in which only Mizaj (temperament) of humours get altered result in only functional disturbances of articular surfaces and it is of short duration while Waja ul Mafasil Maddi is one in which there is derangement of temperament along with deranged humours in quantity (Ibne Sina Shaikh ur Rais).

Various Unani physician like Shaikh ul Rais Ibne Sina, Ali bin Abbas Majoosi had already described certain risk factors in Unani which predispose and aggravate the disease. These factors include Exposure to extreme cold, Sedentary lifestyle and lack of Exercises, Excessive coitus, impro- per digestion, Excessive use of Alcohol etc.

All these factors contribute to worst the condition (Ibne Abbas Majoosi, Ibne Sina Shaikh ur Rais, Abbu Bakar Zakaria Razi).

### Objective of a Study

- To assess cervical spondylosis patients' mizaj.
- Assessing the function of Mizaj in cervical spondylosis patients.

## 2. MATERIALS AND METHODS

From April 2023 to May 2023, a sample of 60 patients was studied in the department of Ilaj Bit Tadbeer at the AKTC faculty of Unani medicine at AMU Aligarh. Patients were chosen based on a clinical examination, investigation, and history.

The Ilaj Bit Tadbeer, AKTCH, AMU Aligarh outpatient department served as the source for the case selection. Complete histories from the past and present were obtained from the patients, and a general and systemic examination was performed.

Prior to their enrollment in the study, each patient received a set of specifically created informed consent forms that contained every relevant detail about the research along with the ability to ask any questions they might have had.

### 3.1. Inclusion criteria

- Clinically diagnosed patients of cervical spondylosis and confirmed by radio-diagnosis or

presence of degenerative changes in cervical spine x-ray.

- Chronic or recurrent neck pain or shoulder pain at least of 3 months duration.

The patients aged from 18 years to 60 years old of both genders.

- The patients who agree obeying to the guidelines and sign an informed consent form.
- There is a washout period before starting the treatment.

### 3.2. Exclusion criteria

- Patients below the age of 18 years and above the age of 60 years.
- Spinal fractures and recent cervical surgery.
- Patients with radicular arm pain and sensory motor deficit.
- Pregnancy and lactation.
- Patients with uncontrolled DM, HTN and other systemic or inflammatory diseases such as juvenile Rheumatoid Arthritis, Ankylosing spondylitis, Psoriatic arthritis etc.
- Patients unwilling to give consent for the trial and follow up.

### Assessment of Mizaj (Temperament)

The Central Council for Research in Unani Medicine (CCRUM), ministry of AYUSH, government of India, produced a specially constructed questionnaire format that was used to analyse each patient's temperament, or mizaj.

**Table 1. ASSESSMENT OF MIZAJ (TEMPERAMENT)**

SIGNS OF MIZAJ				
PARAMETERS (Ajnas-e-Ashra)	DAMVI (SANGUINE)(1)	BALGHAMI (PHLEGMATIC) (0.75)	SAFRAVI (BILIOUS) (0.5)	SAUDAVI (MELANCHOLIC) (0.25)
COMPLEXION	Ruddy Reddish/Whey brown)	Chalky (whitish)	Pale (Yellowish)	Purple (Blackish)

BUILT	Muscular & Broad	Fatty & Broad	Muscular & Thin	Skeletal
TOUCH	Hot & Soft	Cold & Soft	Hot & Dry	Cold & Dry
HAIR	Black & Luster, Thick, Rapid growth	Black & Thin Slow growth	Brown & Thin Rapid growth	Brown & Thin Slow growth
MOVEMENT	Active	Dull	Hyperactive	Less Active
DIET (MOST LIKED)	Cold & dry	Hot & dry	Cold & moist	Hot & moist
WEATHER (MOST SUITABLE)	Spring	Summer	Winter	Autumn
SLEEP	Normal (6-8 hours)	In Excess	Inadequate	Insomnia
PULSE	Normal in Rate (70-80/min) Large in volume	Slow in Rate (60-70/min) Normal in volume	Rapid in Rate (80-100/min) Normal in volume	Slow in Rate (60-70/min) Small in volume
Psychological/Emotional	Normal	Calm & quit	Angry	Anxious

### Range of Mizaj in Numbers:

Damvi (7.5-10), Balghami (5.10-7.50), Safravi (2.51-5.0), Saudavi (0.00-2.50)

patients enrolled in the study, 39 patients (65%) had Mizaj from Balghami, 18 patients (30%) from Damawi, 3 patients (5%) from bafrawi, and no patient from Sawdawi.

### 3. RESULTS AND DISCUSSION

After using a specially designed format to assess the Mizaj of patients with cervical spondylosis, the results revealed that, of the 60

Thus, it is clear that barid ratab mizaj (cold and wet temperament) is the predominant mizaj (Phlegmatic disease) associated with cervical spondylosis.

**Table 2. Distribution of Patients According to Sex**

Gender	No. of Patients	Percentage (%)
Male	5	8.34
Female	55	91.66
<b>Total</b>	<b>60</b>	<b>100</b>

**Table 3. Distribution of Patients According to Mizaj**

Mizaj (Temperament)	No. of patients	Percentage (%)
Damawi	18	30
Balghami	39	65
Safrawi	3	5
Sawdawi	0	0
<b>Total</b>	<b>60</b>	<b>100</b>

**Table 4. Distribution of Patients according to severity of disease on VAS scale**

Severity of Pain	No. Of Patients	Percentage (%)
Mild pain	1	1.67
Moderate pain	30	50
Severe pain	29	48.33
<b>Total</b>	<b>60</b>	<b>100</b>

#### 4. CONCLUSION

Degenerative alterations in cervical spondylosis begin in the intervertebral discs, resulting in the production of osteophytes and the involvement of surrounding soft tissue structures in the cervical area. Cervical spondylosis is referred to in Unani medicine as Waja ul Mafasil, which is also known as Waja ul Unq (Samar Qandi).

Cervical spondylosis is a general term used to describe age-related disc deterioration. In addition to the synovium and capsule of the facet joints, the peripheral regions of the disc also include nerve fibers and nociceptive nerve endings. The three clinical syndromes of Waja ul Unq (Cervical spondylosis) are caused by

these degenerative alterations and the resulting nerve impingement.

The term “temperament,” or “mizaj,” in Unani medicine refers to the normal biochemical balance of the body’s cells, tissues, organs, and overall structure. A shift from this balance is referred to as a sue-mizaj, or temperamental disorder. Waja ul Mafasil is brought on by an abnormal alteration in the body’s homeostasis brought on by a temperamental disorder, which might impact the entire body or just the essential organs (A’azae-Raeesa). This abnormal change in the temperament causing arthritis (Abbu Bakar Zakaria Razi, Ibne Zohar, Ibne Rushd). Imaging investigations typically show patho ana-

tomic alterations clearly, and these findings must be compared to the clinical ones. The majority of individuals with cervical radiculopathy, mild cervical myelopathy, or axial neck discomfort respond better to an initial trial of non-operative treatment.

A variety of symptoms can be caused by cervical spondylosis. Both the prognosis and the symptoms could change suddenly. Self-care techniques and lifestyle modifications can help many people with their arthritis symptoms and keep it from getting worse. A significant fraction of the population is affected by the condition known as cervical spondylosis. It is a natural part of becoming older, but with proper posture and avoiding occupational or vocational trauma involving excessive axial loading, development may be reduced. Treatment must be individualized for each patient in order to address their symptoms and stop or prevent neurological decline.

Based on the study's findings, it can be said that temperamental changes happen from birth to death since they are essential to life. Throughout life, the physiological conditions and necessities under which one exists fluctuate, and with them, so does one's temperament. The middle age and the elderly persons are not only cold but also dry. Therefore occurrence of cervical spondylosis is more in phlegmatic temperament and middle aged individuals.

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