

Review Article

Overview of Cervical Spondylosis and its Management through Unani Medicine

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A B S T R A C T

Cervical spondylosis is a common degenerative neuromuscular condition frequently encountered in young adults. About 25% of people under the age of 40 years show signs of spondylosis, which increases to 50% over the age of 40 years; and about 85% over the age of 60 years. In Unani medicine, cervical spondylosis is described as *Waja-ul-Unq* (neck pain) under the category of *Auja-e-Mafasil* which includes all types of joint pain. The symptoms are *Waja* (pain), *Salabat* (stiffness) restricted neck and shoulder movements, and *Suda'a* (headache). This review describes the modern as well as Unani perspectives of cervical spondylosis and its management through various conventional and Unani therapeutic modes. In the view of Unani perspective, it can be concluded that various modes of *Ilaj-bit-Tadbeer* (regimenal therapies) and pharmacotherapies may be recommended for the management of cervical spondylosis.

Keywords: Cervical Spondylosis, Neck Pain, *Ilaj-bit-Tadbeer*, Unani Medicine, *Waja-ul-Unq*

Introduction

Cervical spondylosis, also known as cervical degenerative disease, is a commonly diagnosed neurological condition frequently encountered in young adults. About 25% of people under the age of 40 years show signs of spondylosis, which increases to 50% of those over the age of 40 years and 85% of people over the age of 60 years. The degenerative changes most commonly occur in cervical vertebrae 6-7, followed by 5-6. The pain in the neck in

cases of cervical spondylosis has become a common health issue globally among adults above the age of 40 years. It has become an important social and public health issue as a consequence of its high prevalence, unsatisfactory treatment options, and reduction in quality of life.¹ Global Burden of Disease 2015 reports that neck and back pain are the leading causes of disabled years and the fourth leading cause of DALYs (Disability-adjusted life years), and YLD (Years of healthy life lost due to disability).² In

some studies, the prevalence of cervical spondylosis has been estimated to be up to 89.7%, of which a significant number of patients develop more severe symptoms due to nerve root or spinal cord compression, resulting in radicular pain or myelopathy.³

Pathophysiology

The degeneration of cervical intervertebral discs and facet joints is an important cause of spondylosis. Disc disintegration and the onset of spondylosis are natural consequences of the ageing process. Approximately 95% of adults have some degree of cervical spondylosis by the age of 65 years.⁴

Desiccation of the intervertebral disc precedes degenerative changes, which are accompanied by an increase in the ratio of keratin sulphate to chondroitin sulphate.⁵ Degenerative alterations in the adjacent structures such as the facet and uncovertebral joints, posterior longitudinal ligament and ligamentum flavum cause narrowing of the intervertebral foramina and spinal canal which in turn results in compression of the spinal cord, nerve roots and the spinal vasculature. Consequently, cervical spondylosis may present with three clinical conditions viz. axial neck pain, cervical myelopathy, and cervical radiculopathy.^{5,6}

Risk Factors

Cervical spondylosis is most often brought on by the natural deterioration of the disc present between the vertebrae and other cervical vertebral components as people age. It can develop prematurely in people who engage in high-impact sports like rugby, soccer, and horse riding, or who have a congenital narrow vertebral canal, a history of spinal trauma, or dystonic cerebral palsy affecting their cervical muscles.⁷

Clinical Presentation

The majority of spondylosis patients are asymptomatic. Most of the symptomatic individuals are above 40 years of age and exhibit three types of presentation viz. discomfort and pain in neck, cervical radiculopathy, and myelopathy.⁵ Signs and symptoms of cervical spondylosis include stiffness in neck, occiput pain (pain at the occipital area of the head), occasional pain referring to upper limbs, retro-orbital or temporal region from 1st and 2nd cervical vertebrae, vague numbness, tingling sensation, or even weakness in the upper limbs, dizziness or vertigo, difficulty in maintaining balance, and in rare cases, syncopal attacks, episodes of migraine, or "false angina". Unless accompanied by myelopathy or radiculopathy, poorly localised pain, restricted movements of the neck including flexion, extension, lateral flexion, and rotational movements, and mild neurological abnormalities

such as inverted supinator jerks are all indicative of cervical spondylosis.⁸

Cervical Spondylosis in Unani Medicine

There is no direct reference to cervical spondylosis in Unani medicine; the disease *Waja-ul-Unq*, mentioned as a type of *Waja-ul-Mafasil*, most aptly refers to cervical spondylosis. It is discussed under the category of *Auja-e-Mafasil* which includes all types of pain like *Waja-ul-Warik* (hip pain), *Irq-un-Nasa* (sciatica), *Waja-ul-Unq* (neck pain) etc. According to the Unani concept, *Waja-ul-Unq* is a result of excessive cold exposure and prolonged abnormal posture of the neck during sleep and work. It causes contraction of the neck muscles (*Qasiyah Hilmiyah*). The symptoms are *Waja* (pain), *Salabat* (stiffness), *Suda'a* (headache), and restricted neck and shoulder movement. The neck pain is aggravated by any jerking movement of the head.⁹ Local tenderness and swelling may also be present.¹⁰⁻¹⁴

In Unani medicine, *Su-e-Mizaj Sazij/ Su-e-Mizaj Maddi* are considered the main pathological factors of *Waja-ul-Unq*. The legendary scholar Ibn Sina in his book *Al Qanoon* mentioned that the pain is due to the accumulation of excess humor (*khilt*) or due to *Mawad-e-Fasida* (morbid humor) in the joint spaces which leads to *Su-e-Mizaj*. The primary site of the pain is the joint where morbid humor is accumulated.¹¹ In the case of *Su-e-Mizaj Sazij*, there is derangement of the temperament of the affected part which is why it becomes painful without any swelling or inflammation.^{10,12} In the case of *Su-e-Mizaj Maddi*, *Waram* (inflammation) is due to the accumulation of excess humors especially due to *lazij balgham* (highly viscous phlegm), and sometimes due to the excess and admixture of *Dam* and *Safra*, however, the involvement of *Sauda* is a rare condition.¹⁰⁻¹⁴ Legendary Scholar and Physician Samarqandi pointed out that the ailment is the result of the weakening of joints which makes them susceptible to the accumulation of morbid matter.⁹

Ibn Zohar, a renowned Unani scholar, asserted that coldness or any other factors that cause the collection of *Balgami madda* (phlegmatic matter) in the neck region may result in neck pain. Cold exposure may also cause stiffness in the neck muscles.¹⁵

Diagnosis

Typically, the diagnosis of cervical spondylosis is made on the basis of clinical presentation or symptoms and signs (Table 1). The pain is mostly located in the neck, but it can extend to the adjacent area and can increase by movement of the neck. Upper and lower limb neurological abnormalities only occur when spondylosis is exacerbated by radiculopathy and myelopathy.⁸

Table I. Clinical Presentation of Cervical Spondylosis

Symptoms
• Pain in neck
• Aggravation of pain on movement
• Radiation of pain (upper limbs, shoulders, and occiput)
• Temporal or retro-orbital pain (from 1st and 2nd cervical vertebrae)
• Neck stiffness – may or may not be reversible
• Weakness of upper limbs (numbness and tingling)
• Dizziness
• Vertigo
• Migraine triggered by occasional syncope
Signs
• Localised tenderness
• Restricted range of movement such as limitations in forward/ lateral flexion, backward extension, and bilateral rotation
• Minor neurological manifestations like inverted supinator jerks may be found if complicated by myelopathy or radiculopathy

For neck and upper extremity discomfort, plain radiographs are an appropriate initial imaging investigation. Imaging-detected degenerative changes are frequently correlated with the existence of neck pain. Radiographic manifestations of degenerative disc disease include osteophyte growth, narrowing of intervertebral disc space, sclerosis of endplates, uncovertebral as well as facet joint degeneration, and calcification of soft tissues. When evaluating the brain and other soft tissues, MRI remains the investigation of choice.⁶

Conventional Management

The therapeutic plan for cervical spondylosis relies on the severity of the disease and the condition of the patient. The goals of treatment are to alleviate discomfort, improve daily functioning, and prevent permanent damage to neural systems. Signs and symptoms linked with cervical spondylosis should be approached in stages, beginning with non-surgical treatment.

Non-surgical Management

Physical Therapy

The bulk of non-surgical treatment entails 4-6 weeks of physical therapy consisting of resistance and isometric exercises designed to improve the muscle strength of upper back and neck. Treatment of acute or chronic neck pain with physical therapies such as cervical traction, hot fomentation, application of ice packs, ultrasound therapy, therapeutic massage, and transcutaneous electrical nerve stimulator (TENS) is not supported by sufficient data.¹⁶

Pharmacotherapy

Prescriptions for pain management may include NSAIDs, systemic steroids, muscle relaxants, antidepressants, and anticonvulsants. Myofascial pain can manifest clinically as neck, shoulder, and upper arm pain, which can be relieved by injections on trigger points. Injection of epidural steroids, zygapophyseal joint injections, and nerve root blocks are examples of interventional treatments that are more invasive.

Surgical

Surgery may be considered for patients having progressive and/ or severe myelopathy, chronic axial neck pain, or radiculopathy despite non-surgical treatment. Such people may have a neuroimaging-detected pathological condition also that matches their clinical symptoms. The surgical strategy is determined by the clinical syndrome and location(s) of the pathology.¹⁷

Management in Unani System of Medicine

Management in the Unani system of medicine for cervical spondylosis is according to the *Usool-e-Ilaj* of *Waja-ul-Mafasil* with regimens of *Ilaj-bil-Ghiza*, *Ilaj-bil-Dawa* and *Ilaj-bit-Tadbeer*. Treatment aims to relieve pain, minimise morbidity, and increase patients' quality of life. The basic principles of treatment include *Tadil-e-Mizaj* (correction of temperament), *Istifragh* (elimination) of morbid matter, and *Taqwiyat-e-Mafasil* (strengthening of joints). The correction of the deranged humour is done through

Imala-e-Mawaad-e-Fasida (diversion of morbid matter) from the site of pathology, or *Istifragh-e-Madda* (evacuation of morbid matter). The relief of pain and inflammation is achieved by *Musakkinat* (analgesic drugs) and *Muhallilat* (anti-inflammatory drugs). The strengthening of muscles and nerves can be achieved through *Muqawwiyat-e-Asab* (nervine tonics), *Dalak* (massage), and various types of *Riyazat* (exercise).

The therapeutic schedules include various oral and topical pharmacological agents like *Habb-e-Suranjan*, *Majoon Suranjan*, *Majoon Chobchini*, and *Majoon Ushba*. *Habb-*

e-Asgand, *Roghan Suranjan*, *Roghan Babuna*, *Roghan Qust*, *Roghan Kuchla* etc (Tables 2 and 3) and regimens like *Hijamah-bil-shart* (wet cupping), *Hijamah-bila-shart* (dry cupping), *Fasd* (venesection), *Irsal-e-Alaq* (leech therapy), *Dalak* (massage), *Nutool* (irrigation) etc (Table 4).¹⁸ Eminent Unani physician Ibn Sina (980-1037 AD) in his book *Al Qanoon fit Tib* mentioned that the displacement of vertebrae results in restrictions of movement. Further, he elaborated that if adjacent nerves are affected, it may result in pain which can be severe in intensity. In such cases, regimes such as *Fasd*, *Hijamah*, etc are beneficial.¹¹

Table 2. Single Herbs for Cervical Spondylosis

S. No.	Single Herbal Drug	Botanical Name	Action
1.	<i>Suranjan Shireen</i> (Golden collyrium)	<i>Colchicum luteum</i>	<i>Muhallil</i> (anti-inflammatory), <i>Munzij</i> (concoctive) ¹⁹⁻²¹
2.	<i>Chobchini</i> (China root)	<i>Smilax china</i>	<i>Muhallil</i> (anti-inflammatory)/ <i>Munzij</i> (concoctive) ¹⁹⁻²¹
3.	<i>Muqil</i> (Bdellium)	<i>Commiphora mukul</i>	<i>Murakhi</i> (relaxant)/ <i>Muhallil</i> (anti-inflammatory) ¹⁹⁻²¹
4.	<i>Farfiyun</i> (Euphorbium)	<i>Euphorbia resinifera</i>	<i>Murakhi</i> (relaxant)/ <i>Muhallil</i> (anti-inflammatory) ¹⁹⁻²¹
5.	<i>Makoh Khushk</i> (Black Nightshade, dried)	<i>Solanum nigrum</i>	<i>Munzij</i> (concoctive)/ <i>Moadil</i> (alterative) ¹⁹⁻²¹
6.	<i>Azaraq</i> (<i>Nux vomica</i>)	<i>Strychnos nux vomica</i>	<i>Muqawwi Aasab</i> (nervine tonic) ¹⁹⁻²¹
7.	<i>Baladur</i> (Marking nut)	<i>Semecarpus anacardium</i>	<i>Muqawwi Aasab</i> (nervine tonic) ¹⁹⁻²¹
8.	<i>Jadwar</i> (Larkspur)	<i>Delphinium denudatum</i>	<i>Muqawwi Aasab</i> (nervine tonic) ¹⁹⁻²¹
9.	<i>Elwa</i> (Aloe)	<i>Aloe barbedensis</i>	<i>Muhallil</i> (anti-inflammatory) ¹⁹⁻²²
10.	<i>Jund Bedstar</i> (Castorium)	<i>Castor canadensis</i>	<i>Muqawwi Aasab</i> (nervine tonic) ¹⁹⁻²¹
11.	<i>Aftmoon</i> (Dodder/ <i>Cuscuta</i>)	<i>Cuscuta reflexa</i>	<i>Munzij</i> (concoctive)/ <i>Moadil</i> (alterative) ¹⁹⁻²¹
12.	<i>Shahtara</i> (Fumitory)	<i>Fumaria parviflora</i>	<i>Munzij</i> (concoctive)/ <i>Moadil</i> (alterative) ¹⁹⁻²¹

Table 3. Compound Drugs for Cervical Spondylosis and Radiculopathy in Unani Medicine

S. No.	Compound Formulation	Ingredients	Dosage Form	Main Action
1.	<i>Majoon Suranjan</i>	<i>Tukhm-e-Karafs</i> , <i>Badiyan</i> , <i>Mirch safed</i> (<i>Filfil Siyah</i> peeled), <i>Satar</i> , <i>Namak Hindi</i> , <i>Barg-e-hina</i> , <i>Bozeedan</i> , <i>Sheetraj Hindi</i> , <i>Beekhe-Kibr</i> , <i>Gul-e-Surkh</i> , <i>Kishneez</i> , <i>Zanjbeel</i> , <i>Saqmoniya</i> , <i>Suranjan shireen</i>	Electuary	Anti-inflammatory (<i>Mohallil</i>) ²³
2.	<i>Habb-e-Suranjan</i>	<i>Sibr saqootri</i> , <i>Tukhm-e-soya</i> , <i>Turbud safaid</i> , <i>Habb-ul-Neel</i> , <i>Muqil</i> , <i>Suranjaan</i> , <i>Mastagi</i>	Tablet	Anti-inflammatory (<i>Mohallil</i>) ²³
3.	<i>Habb-e-Asgand</i>	<i>Ajwain desi</i> , <i>Asgandh</i> , <i>Bidhara</i> , <i>Peepla Mool</i> , <i>Peepal</i> , <i>Zanjabeel</i> , <i>Satawar</i> , <i>Musli siyah</i> , <i>Gur</i> (jaggery)	Tablet	Anti-inflammatory (<i>Mohallil</i>)/ analgesic (<i>Musakhin-e-Alam</i>) ²³
4.	<i>Habb-e-Azaraq</i>	<i>Kuchla</i> , <i>Filfil siyah</i> , <i>Dar-e-filfil</i>	Tablet	(Nervine tonic) <i>Muqawwi Aasab</i> ²⁴

Table 4. Regimenal Therapies for Cervical Spondylosis and Radiculopathy in Unani Medicine

S. No.	Name of Regimenal Therapy	Definition	Site
1.	<i>Fasd</i> (venesection)	A form of blood-letting method that is done by applying an incision to the blood vessels	<i>Qaifal</i> (cephalic vein), <i>Akhal</i> (medial cubital vein) ^{11,18,25}
2.	<i>Hijamah bil-shart</i> (wet cupping)	Cupping with incision	<i>Kahil</i> (point on the inter-scapular region below the 7th cervical vertebra), <i>Akhdein</i> (on the back of both ears), <i>Nuqra</i> (at the back of the cranium 4 inches above the neck) ^{11,14,18,25}
3.	<i>Hijamah bila-shart</i> (dry cupping)	Cupping without incision	<i>Kahil</i> , <i>Akhdein</i> , <i>Nuqra</i> ^{11,14,18,25}
4.	<i>Irsal-e-Alq</i> (leech therapy)	Application of medically bred leech on the affected part; it can be done alone or with some Unani pharmacological agent.	At the site of pain ^{11,14,18,25,26}
6.	<i>Dalak</i> (massage)	Method where pressure kneading, friction, rubbing, tapping against the affected parts of the body with hands or objects like rough cloth with or without <i>Roghan</i> (oil)	At the site of pain ^{11,14,18,25,26}
7.	<i>Nutool</i> (irrigation)	Pouring of Unani medications over various parts of the body	At the site of pain ^{11,14,18,25,26}
8.	<i>Bukhoor/ Inkebab</i>	Medicated steam	At the site of pain ²⁷
9.	<i>Imala</i>	Diversion of the morbid matter from the site of disease through <i>Hijamah</i> or <i>Fasd</i>	<i>Kahil</i> , <i>Akhdein</i> <i>Nuqra</i> ^{11,18,25}

Discussion and Conclusion

Cervical spondylosis is a common problem in adults as well as in young people due to the mode of their work and lifestyle. Currently, many non-pharmacological and pharmacological therapies are being used for the management of cervical spondylosis in conventional medicine. Non-pharmacological therapies have certain drawbacks like cervical traction and neck exercises give only temporary relief and the long use of cervical collars weakens the muscles. Pharmacological agents that include analgesics, NSAIDs, muscle relaxants, and corticosteroids, carry a major burden of unwanted side effects as they are to be administered repeatedly. Surgical treatments have their shortcomings like failures and non-compliance of patients.²⁸

The Unani system of medicine provides multiple modes of treatment with fewer side effects. It treats the *mad'da* (cause) of the disease by therapies of *Ilaj-bit-Tadbeer* like *Fasd* (venesection), *Hijamah-bil-shart* (wet cupping), *Hijamah-*

bila-shart (dry cupping), *Irsal-i-Alaq* (leech therapy), *Dalak* (massage), *Nutool* (irrigation). All these abovementioned regimenal therapies have an analgesic effect and are usually harmless with no known adverse effects. However, further research is necessary to scientifically validate the long-term impacts of these treatment methods.

Conflicts of Interest: None

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