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## Management of cervical spondylosis in unani system of medicine

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### Abstract

Cervical spondylosis is one of the most common degenerative conditions of the spine. It is caused by the degeneration of cervical intervertebral discs, osteophytosis of vertebral bodies, hypertrophy of the facets and laminal arches, and ligamentous and segmental instability. Risk factors are Age, occupation, genetics, previous injury or trauma. The main complaints are pain in the head, neck and shoulder with corresponding tenderness, sometimes radiation and decreased cervical range of motion. Conventional treatment for cervical spondylosis includes pharmacological and non-pharmacological modalities. All these treatment modalities have a range of effects and their availability is meagre and cost over burdened. *Hijamah* is a Unani regimenal mode of treatment which has been proved effective in various musculoskeletal disorders. In present paper efforts has been made to elaborate the role of *Hijamah* in the management of cervical spondylosis and to correlate its mechanism with other physical therapies like traction and message therapy, ultrasound and diathermy.

**Keywords:** *Hijamah*, cupping therapy, cervical spondylosis, arthritis of neck

### 1. Introduction

Cervical spondylosis is a chronic degenerative condition of the cervical spine that affects the vertebral bodies and intervertebral disks of the neck [1, 2]. It is a collective term describing degenerative changes that occur in the apophysial joints and intervertebral disc joints of cervical vertebrae, with or without neurological sign [3, 4]. It is radicular pattern of pain in one or both upper limbs due to compression or irritation of one or more cervical nerve roots [5, 6]. It has considerable impact on individuals, their families, healthcare systems and businesses [7, 8]. Cervical spondylosis occurs mostly in 4<sup>th</sup> and 5<sup>th</sup> decade of life [6, 9]. In developing countries it is common among adults and demand for medical services contributes to the economic burden [5, 10]. In India, its overall prevalence range from 5.3% to 6.7% in general population [7, 9] and it is 8.4% in females and 3.4% in males that is higher in females [7].

Symptoms caused by cervical spondylosis can be categorized broadly into three clinical syndromes: axial neck pain, cervical radiculopathy, and cervical myelopathy. Axial Neck pain which is localized to neck and spinal column and neck stiffness. Radicular symptoms include sharp pain in dermatomal distribution that radiates from cervical region to downward, one of the arms, shoulder and sometimes interscapular region [2, 11]. Pain increases on neck stretching or turning of head. Numbness, paraesthesia and muscle weakness may also be present. Myelopathic symptoms may be found when there is spinal cord compression. These may include lack of co-ordination, weakness in grip, bladder and bowel incompetence. Occasionally migraine may also be triggered [12] and Suboccipital headache that radiates to base of the neck and temple [2], in some cases dysphagia and airway dysfunction has been reported as a result of central cord syndrome [13, 14]. Localised tenderness, limited range of motion and spurling sign in case of cervical nerve root compression are the signs of cervical spondylosis.

In Classical Unani Literature Cervical Spondylosis is mentioned as neck pain and has been described as *waja-ul-unq* (Samarqandi), a type of *waja-ul-mafasil* (joint pain), exposure derangement of humours and accumulation of morbid humours are among its causes [15-18]. The clinical features and etiology of neck pain described in Unani literature resembles to Cervical spondylosis under the term of *waja ul unq* which is a sub-type of *waja ul mafasil* [19], as it is stated by Ibn e Abbas Majusi that *waja ul mafasil* also occur in jaws, ear ossicles and vertebrae [20]. Eminent Unani scholar Ibn Zohar stated that exposure to cold or any factor that leads to accumulation of *balgami* (phlegmatic) matter in the neck area are chief sources of neck pain. Due to cold, there may be firmness in nerves and muscles of neck [21].

Ibn Rushd illustrated that stiffness is the shortening of nerves in breadth and length which further shortens the supplying muscles and *sue mizaj ratab maddi* is one of the reasons for it [22].

Unani mode of treatment for cervical spondylosis is as per the line of treatment of *amraze mafasil* (joint diseases) with regimens including diet, drugs, and surgery along with certain specific regimens like *munzij-mushil* therapy, *takmeed* (fomentation), *zimad* (paste), *tila* (liniment), *roghaniyat* (Oils), *dalk* (massage), *hijamah* (cupping), *fasd* (venesection) etc. [15, 17, 23]. *Hijamah* therapy has seen resurgence as a treatment modality for various musculoskeletal disorders in recent times. Broadly there are two types of *Hijamah*: *Hijamah bil shart/ Al Hijamah* (Wet Cupping) and *Hijamah bila shart* (Dry Cupping). In *Al Hijamah* i.e., Cupping with Scarification, cups are positioned by creating vacuum after scarification over the skin of the affected area [23-28]. It works on principle of *tanqiya-e-mawaad*, i.e. evacuation of morbid matters from affected area, hence is effective in relieving the symptoms [23-27].

## 2. Management

Cervical spondylosis is managed by pharmacological, non-pharmacological and surgical intervention depending on the condition and severity of the case. Surgical intervention is rule in cases with myelopathy.

### 2.1 Pharmacological treatment

Pharmacological intervention includes non-steroidal anti-inflammatory drugs, opioid analgesics, muscle relaxants, corticosteroids and tricyclic antidepressants [4, 29]. NSAIDs: They have both analgesic and anti-inflammatory effects, they are commonly used for spinal problems. Muscle relaxants are commonly used to reduce muscle spasm and improve blood circulation. They are reported to be more effective when taken together with NSAIDs [1, 30, 32]. Opioid analgesics and tricyclic antidepressants are also used in chronic condition to improve quality of life of patient [4, 29]. Corticosteroids: Systemic corticosteroids are also used however there is limited evidence in its support [29]. Cervical, intra-articular steroid injections are sometimes helpful in active synovitis [33]. Cervical epidural block or selective nerve root block is beneficial in radiculopathy [33].

### 2.2 Non- pharmacological treatment

Non pharmacological management include physical therapy, exercise, manual therapy like massage and manipulation, cervical collar, Occupational therapy are among non-pharmacological measures to treat cervical spondylitis [34, 35, 36].

### 2.3 Surgical

Surgery is indicated in cases of myelopathy with progressive neurological deficit, cervical nerve root and /or cervical canal compression, and obstinate pain.

### 2.4 Complementary and alternative management

In Complementary and alternative medicine use of analgesic and anti-inflammatory medications is common. There are some other modalities like massage therapy, chiropractic, physical therapy, acupressure and acupuncture that are also beneficial in cervical spondylitis [2, 34].

## 2.5 Physiotherapy

Cervical traction, passive modalities like heat application superficially by heat packs or deep heat transfer by ultrasound or diathermy [3, 4, 33, 40].

## 3. Unani treatment of cervical spondylosis

In Unani System of medicine the aim of treatment is to reduce disability and morbidity. The basic principles of treatment include *Tadil-e-mizaj* (Correction of temperament), *Istifragh-e-madda* (Elimination of causative substance), *Taqviyat-e-mafasil* (Strengthening of joints), *Taskin-e-dard* (Relief of pain). Correcting the derangement of humours (*akhlal*) through *imala-e-mawaad* (diversion) or *istafragh* (evacuation) of morbid humours is done to restore the normal temperament along with relieving pain and inflammation by *musakkinat*, *mohallilat* and *muqawwiyat* (analgesic, anti-inflammatory and tonic drugs) and strengthening of muscles and nerves through *muqawwiyat* and *riyazat* (exercise) [5, 6, 7, 8]. Line of treatment is made through both pharmacological (*Ilaj bil dawa*) and non-pharmacological (*Ilaj bil tadbeer*) modes along with dietary precautions (*Ilaj bil ghiza*) as Razi recommended to take vegetables and to avoid meat as it is harmful for *wajaul mafasil* [9].

### 3.1 Ilaj-bil-dawa (Pharmacotherapy)

Oral as well as local administration of anti-inflammatory and analgesic drugs are mentioned in Unani literature [9-16]. Clinical studies have been carried out to evaluate the effect of different Unani drugs in various types of arthritis (*waja-ul-mafasil*). The studies have been done to see the anti-inflammatory and analgesic activity in rheumatoid arthritis, knee osteoarthritis, PIVD etc. both oral as well as local medication [6, 17-21].

There are many single drugs which have been mentioned in Unani literature like *Suranjaan* (*Colchicum luteum* Baker) *Asgandh* (*Withania somnifera*), *Zanjabil* (*Zinjiber officinale*), *Badiyan* (*Foeniculum vulgare*), *Muqil* (*Cammiphora muqul*), *Qast* (*Saussurea lappa*), *Khardal* (*Brassica nigra* Linn), *Saqmonia* (*Convolvulus scammonia*), *Bozidan* (*Tanacetum umbelliferum*), *Mako* (*Solanum nigrum*), *Kasni* (*Chicorium intybus* Linn), *Nakhona* (*Astragalus hamosus*), *Saqmonia* (*Convolvulus scammonia*), *Turbud* (*Operculina terpeethum*), *Shahtara* (*Fumaria parviflora*) among which *Suranjaan* is the drug of choice in all types of *waja-ul-mafasil* [7, 22-30]. *Qamar Uddin et al.* in a clinical study found the significant effect of a unani formulation in *wajaul mafasil* (joint pain) [6]. The effect of Unani Medicine in the treatment of different joint pain, like rheumatoid arthritis and osteoarthritis has been also studied by *Mohd Ajmal* [31] and *Shakir Jamil* [32] *Abdul Azeez* [33], *Mushtaq A Payer* [34].

*Munzij-mushil therapy* (concoctive and purgative therapy), is indicated in *wajaul mafasil* for elimination of morbid humour and to bring humoral balance, using decoction of single drugs like *Suranjaan sheerin* (*Colchicum luteum*), *Badiyan* (*Foeniculum vulgare*), *Bozeedan* (*Pyrethrum indicum*), *Chiraita* (*Swertia chirata*), *Aftimoon* (*Cuscuta chinensis*), *Unnab* (*Zizyphus vulgaris*), *Shahm-e-hanzal* (*Citrulus colocynthis*) along with some compound drugs like *Majun chobchini*, *Majun ushba* etc. [19]. They have been evaluated for joint pain or types of *wajaul mafasil* M. Jafar [20] and *Muzamil Rehman* [21].

For neck pain local application of *musakkin advia* (pain relieving drugs) in the form of *Zimad* (embrocation) and *roghan* (oil) like *roghan suranjaan*, *roghan baboona*, *roghan*

*zaitoon, roghan shibt, roghan susan, roghan qust, roghan akhrot, roghan nargis* are recommended [5, 6]. The effect of a topical Unani medicine in the management of *waja-ul-mafasil* (Arthritis) has been assessed and recommended [35]. Quamri *et al.* conducted a preliminary clinical trial on the efficacy of Roghane Dafli (*Nerium Oleander L.*) in non-specific low back pain [36]. Another clinical study was on *Roghane Gule Akh* in cervical spondylosis [37] and *irqannasa* or *sciatica* [20].

For neck stiffness, if it is due to *yabusat* or dryness, then *tarteeb* of whole body and the affected part should be done. And if the stiffness is due to *ratubat-e-fuzliya* which causes shortening of nerves or stiffness, then *mushilat* (purgatives) should be given [18, 21].

### 3.2 *Ilaj-bil-tadbeer* (Regimenal therapy)

**3.2.1 *Riyazat* (Exercise):** *Riyazat* is also an important aspect of therapeutic regimen. *Riyazat-e-motadil* (exercise within normal limits) is recommended before meals and after the digestion of food eaten [6, 38]

### 3.2.2 *Hammam* (Turkish bath) and *Dalak* (Massage)

To provide warmth, *hammam* are beneficial. Patients are advised to spend 10-15 minutes fully immersed at a temperature between 37°C and 40°C. This should be followed by an hour of rest in towels [6, 19]. Ghufuran *et al.* did a clinical study on the effect of *Dalk Layyen* in Cervical spondylosis [37] M. Jafar *et al.* on *Sciatica* [20].

### 3.2.3 *Bukhoor* (Medicated steam)

The effect of medicated steam of volatile anti-inflammatory drugs like *Nakhoona, Baboona, Makoh Khushk, Gul-e-tesu* and *Namak-e-lahori* has been proved through various clinical studies [6, 13, 17, 19].

### 3.2.4 *Fasd* (venesection)

*Fasd* is indicated in the management of *wajaul mafasil damvi* (sanguinous arthritis). *Basaliq* (Basilic vein) is usually chosen for venesection. When *wajaul mafasil* is asymmetric the basilic vein of affected site should be used for venesection, when it is symmetric the basilica vein of both sides of the body should be used for venesection [15, 19, 26]. It is a method of evacuation of qualitatively or quantitatively morbid blood by giving incision to superficial vessels [39]

### 3.2.5 *Hijamah* (cupping)

It is a Unani mode of treatment which is carried out by the application of cup shaped vessels by creating vacuum. It has physiological effect on the body. Cupping influences haematological, circulatory, immunological and neurological systems [40]. *Hijamah bila shart* (cupping without scarifications) diverts the morbid material, improves blood circulation and lymphatic drainage. However, *Hijamah bil shart* (cupping with scarification) relieves congestion, removes toxins and evacuates the morbid humour. Both the types of *hijamah* are indicated for different types of *wajaul mafasil* [15, 19, 26].

The effect of *Hijamah* in the management of different types of arthritis has been proved through various clinical studies [41] Low back pain [42], arthritis [43-50], *sciatica* [51, 52]. Ghufuran *et al.* [71] and shazia *et al.* [84] carried out clinical studies on significant efficacy of *Hijamah bila shurt* in cervical spondylosis.

The sites for *Hijamah* has been mentioned in classical Unani literature and recommended by eminent Unani scholars as

*Nuqra* and *akhdain* [28, 87-89] and *akhdain* has also been recommended by Jurjani [26] and Kabiruddin [49]. Baghdadi [90] and Hamdani [91] has mentioned *Nuqra* as a sight for *hijamah* in cervical spondylosis. *Nuqra* is a point located at the back of the neck at 7<sup>th</sup> cervical vertebra and *Akhdain* is the point at the back of neck bilaterally 3-4 cm lateral to the lower border of C7.

### 4. *Tahaffuzi tadabeer* (Prevention)

Patients of cervical spondylosis should avoid the exposure to cold, should avoid long hours of office working in same position or heavy lifting, long driving and bad postures.

### 5. Effect of *Hijamah* in cervical spondylosis

Cervical spine disk loses its elasticity with ageing and causes disk herniation which causes compression on spinal structures [34, 40]. Due to neural and vascular compression there is increased sensitivity to nerves, hypoxia further increases sensitivity [92]. When *Hijamah* is done over the sites *Nuqra* (C7) and *Akhdain* (3-4 cm lateral to the lower border of C7) where the cervical muscles like trapezius, splenius capitis, splenius cervicis and levator scapulae are present, by creating negative suction pressure, improves blood circulation, improves metabolic waste removal thus it relieves vascular congestion [93] and this effect is similar to massage therapy, which is proved to be more effective at decreasing disability than exercise and a safe and better treatment option for chronic neck pain [34, 35, 36]. By increasing circulation it provides heat to the tissues as provided by ultrasound and diathermy [33]. It also enhances nerve root health by improving blood circulation as hypoxia further increases sensitivity [34, 92]. *Hijamah* decreases the compression and relieves pain and other symptoms as it is done by traction [40]. Also *hijamah* relieves pain as it is stated by the theory of segment or reflex zone and by releasing esndorphins [94, 95]. It increases cervical range of motion by releasing cervical muscle spasm by applying wet cupping over trapezius muscles which play important role in mobility of neck.

### 6. Conclusion

It can be concluded that *Hijamah* is an effective method of treatment for cervical spondylosis. It gives the benefits of traction, message, diathermy and exercise in a single modality i.e. *Hijamah* or wet cupping and improves quality of life of the patients having cervical spondylosis on a very low cost. However, further studies are needed to be done.

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