

REVIEW ARTICLE

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An Overview of *Waja-ur-Rukbah* (Knee Osteoarthritis) with Reference to *Waja-ul-Mafasil* and its Regimenal Management (*Ilaj bit tadbeer*) in Unani System of Medicine

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ABSTRACT

Pain in joints is a major clinical problem since ancient times. Inflammatory or non-inflammatory joint disorders have been described elaborately by eminent Unani physicians under one caption of *Waja-ul-Mafasil*, which stands for pain in joints. On the basis of clinical presentation, osteoarthritis looks very similar to *Waja-ul-Mafasil Balghami*. One of the most common forms of osteoarthritis is Knee Osteoarthritis (KOA), which can be translated as *Waja-ur-Rukbah*. Osteoarthritis, a chronic painful disorder, is primarily treated with non-steroidal anti-inflammatory drugs (NSAIDs) that have a large number of adverse effects, while its management has multidirectional approach in Unani system of medicine. *Waja-ur-Rukbah* is managed with *Istefragh* (evacuation) followed by *Tadeel* (rejuvenation), *Taqwiyat* (strengthening) of the joint and joint structures and *Taskeen* (analgesia). *Istefragh* is achieved by specific poly-herbal Unani formulations i.e. *Munzij-Mushil* Therapy followed by normalization of temperament (*Tadeel-e-Mizaj*) of affected joint and adjacent structures by employing various regimenal modalities such as *Hijama* (cupping), *Dalk* (massage), *Irsal-e-Alaq* (leeching), *Hammam* (Turkish Bath), *Takmeed* (Fomentation), *Nutul* (Irrigation), *Qai* (Vomiting), *Huqna* (Enema), etc. *Taskeen* and *Taqwiyat* are achieved by employing either drugs or regimenal modalities. This overview will address *Waja-ur-Rukbah* and its regimenal management.


Keywords: *Istefragh*; *Tadeel*; *Tanqiya*; *Hijama*; *Dalk*

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Introduction

W*aja-ul-Mafasil* is an Arabic term which denotes pain in joints, especially the joints of upper or lower limbs. Few specific terms have been suggested by Unani scholars according to the joint involved such as *Waja-ul-Katif* (shoulder pain), *Waja-ul-Mirfaq* (elbow pain), *Waja-ul-Khasira* (hip pain), *Waja-ul-Kaab* (ankle pain), *Waja-ur-Rukbah* (knee pain), *Waja-bain-al-Asabe* (inter-phalangeal Joints pain), *Waja-ur-Raqba* (cervical spondylosis), *Niqris* (gout – great toe pain), *Waja-uz-Zahr* (low backache) and *Irq-un-Nasa* (sciatica) when pain starts from hip and spreads down the length of leg^{1,2}. Risk factors, causes, clinical presentation of *Waja-ur-Rukbah* are similar as osteoarthritis described in modern medicine. Osteoarthritis is a disease of olden times which is a leading cause of chronic disability between 4th and 5th decade of life, estimated as second most common rheumatological problem and is most frequent joint disease with overall prevalence in India in the range of 20.5% to 68%. A cross sectional study on burden and determinants of KOA in 2018 in India showed prevalence of KOA among respondents was 27.1% with dominant risk factors like over age (>50 years), female gender, illiteracy, lower socioeconomic class, positive family history of OA, tobacco usage, diabetes mellitus, hypertension. Worldwide, it is estimated that 9.6% of men and 18% of women of 60 or older probably have symptomatic KOA^{3,4,5}.

Aetiology and predisposing factor

According to Unani medical encyclopaedia, causes of *Waja-ul-Mafasil* are classified into two major categories.

A. *Asbab-e-faila* (subjective factors):

Pathology due to *Sue Mizaj Sada* or *Maddi* directly presents in the articular sites and causes accumulation of *mawad-e-fasida* (morbid humours) in the joints⁶.

B. *Asbab-e-munfaila* (risk factors):

These are the secondary factors which indirectly affect the articular region and make the joint susceptible to accept the *mawad-e-fasida* resulting in organic and functional changes in the joints⁶.

Jurjani defined *Waja-ul-Mafasil* as a consequence of accumulated secreted morbid materials in the joints which produces *Waram* (inflammation) and pain. He divided the causes for accumulation of morbid materials in the joints into two types⁷.

A. *Sabab-e-Asliya* (Actual cause)

B. *Sabab-e-Arziya* (Temporary cause)

***Sabab-e-Asliya* (Actual cause):** It includes three factors

- a. Excessive joint movement
- b. Special anatomical joint structure
- c. Deficient *Quwwat-e-Hazimawa Dafea* (digestive and expulsive power) in the joints

***Sabab-e-Arziya* (Temporary cause):** It includes risk factors similar to conventional system of medicine.

- a. Lack or absence of exercise⁶
- b. *Naqs-e-Ghiza* in terms of quality or quantity as well as timing of intake⁶
- c. Excessive intake of sweets, cold and moist diet⁶
- d. Taking alcohol or inebriant materials⁶
- e. Performing exercise and intercourse just after meal⁶
- f. Excessive cold and catarrh⁶
- g. Sudden cessation of a habitual *Istifragh* (evacuation)⁶
- h. Diversion of excessive abnormal humours

towards the joint during the improper treatment of intestinal colic ⁶

i. Increasing age ²

j. Sufferer with chronic diseases ²

k. Males after marriage and females after menopause ²

l. *Mosum-e-Rabi* (spring season) followed by *Mosum-e-Kharif* (autumn season) ^{7,8}

m. Sometimes heredity pattern was observed in this disease ^{7,8}

n. Over exhaustion, hard work, vigorous exercises, excessive sunlight exposure and tiredness exaggerate the disease ^{2,6,7,8}

Mahiyat-e-Marz (Pathogenesis)

Joints are more susceptible organs to get accumulated with morbid matters due to ⁷

i. Spacious structure as compared to other organs

ii. *Barid Yabis Mizaj* (cold and dry temperament)

iii. Weak *Quwwat-e-Hazima wa Dafea* (digestive and excretory powers)

iv. Gravity factor

The most usual causative material for the development of *Waja-ul-Mafasil* is *Balgham-e-Kham* (raw phlegm) produced due to abnormal *Istihala* (metabolism) at the second and third stages of digestion (*Hazm-e-Kabidi* and *Hazm-e-Urooqi*). Dynamic physical movements in the joints stimulates the *hararat-e-gharizya* (innate heat), which migrates stagnated *mavad-e-fasida* (morbid matter) from the interstitial spaces of the body towards the joint cavity. On the other hand joint has property of absorbing and attracting the body fluids due to adequate space, and the *Mizaj-e-Barid* (cold temperament) of the associated tissues of the joint (like bone, cartilage, tendons and ligaments). Thus, the morbid material collected in the joint spaces is not eliminated properly, which gradually affects the joints. The *Balgham-e-Tabiee* (normal phlegm) has *Barid-Ratab Mizaj* (cold moist temperament), already present in the joints.

Excessive accumulation of *Balgham-e-Kham* (raw phlegm) in the joint structures, which already have *Barid-Yabis Mizaj*, synergises the *Barudat* (coldness) in the joints and joint structures. This *Sue Mizaj Barid Mukhtalif* manifests in the form of pain in the joints and joint structures ^{6,7}.

Accumulated *Mawad-i-Fasida* (abnormal matter) will also produce pressure and inflammatory symptoms like pain, stiffness, swelling, redness, etc. Destruction of cartilage and disability result due to increased disease duration.

Types of Waja-ul-Mafasil ^{1,6,9,10}

Waja-ul-Mafasil is classified as follows which is shown in tables 1-7.

Waja-ul-Mafasil Murakkab (Involvement of compound/mixed humours)

Single *Khilt* as well as a combination of two or more *Akhlat* may cause *Waja-ul-Mafasil*. A mixture of *Balgham/Safra*, and *Sauda/Safra* are relatively more common than *Balgham/Sauda*. *Waja-ul-Mafasil Murakkab* due to a combination of *Balgham-e-Ghaleez* and *Safra* is assumed to be the worst variety ^{1,12}.

Waja-ul-Mafasil Reehi (Pneumatic)

It is a rare type of *Waja-ul-Mafasil*, where pain is mild, shifting in nature, with more distension than heaviness ^{1,11}.

Tashkhees (Diagnosis) ^{1,6}

The diagnosis can be made through following points

Δ Onset of pain (gradual, abrupt, sudden) with or without heaviness

Δ Swelling (mild, moderate, severe)

Δ Change in skin colour over the joint (whitish, reddish, yellowish, bluish-black)

Δ *Lams* (tactile sensation/touch), *Nabz* (pulse),

Table 1. Based on presence or absence of <i>Akhlāt-e-Fasīda</i> (Morbid Humours)	
<i>Waja-ul-Mafasil Sada</i>	<i>Waja-ul-Mafasil Maddi</i>

Table 2. Based on <i>Mizaj</i> (Temperament)	
<i>Waja-ul-Mafasil Har</i> (Hot)	<i>Waja-ul-Mafasil Barid</i> (Cold)
<i>Waja-ul-Mafasil Raṭāb</i> (Wet)	<i>Waja-ul-Mafasil Yabis</i> (Dry)
<i>Waja-ul-Mafasil Har Raṭāb</i> (Hot and Wet)	<i>Waja-ul-Mafasil Har Yabis</i> (Hot and Dry)
<i>Waja-ul-Mafasil Barid Raṭāb</i> (Cold and Wet)	<i>Waja-ul-Mafasil Barid Yabis</i> (Cold and Dry)

Table 3. Based on the type of <i>Madda</i> (Material) involved	
<i>Waja-ul-Mafasil Damvi</i> (Sanguineous)	<i>Waja-ul-Mafasil Safravi</i> (Bilious)
<i>Waja-ul-Mafasil Balghami</i> (Phlegmatic)	<i>Waja-ul-Mafasil Saudavi</i> (Melancholic)
<i>Waja-ul-Mafasil Reehi</i> (Pneumatic)	<i>Waja-ul-Mafasil Ufooni</i> (Infectious)

Table 4. Based on the number of <i>Khilt</i> (Humour) involved	
<i>Waja-ul-Mafasil Mufrad</i> (due to involvement of single <i>Khilt</i>)	<i>Waja-ul-Mafasil Murakkab</i> (due to involvement of more than one <i>Khilt</i>)

Table 5. Based on the severity and duration of the disease	
<i>Waja-ul-Mafasil Had</i> (Acute)	<i>Waja-ul-Mafasil Muzmin</i> (Chronic)

Table 6. Based on the joint involvement	
<i>Waja-ul-Mirfaq</i> (Elbow Joint Pain)	<i>Waja-ul-Warik</i> (Hip Joint Pain)
<i>Waja-ul-Kaab</i> (Ankle Joint Pain)	<i>Waja-ul-Rukbah</i> (Knee Joint Pain)
<i>Irq-un-Nasa</i> (Sciatica)	<i>Niqris</i> (Gout)
<i>Waja-bain-al-Asabe</i> (Inter Phalangeal Joint Pain)	<i>Waja-ul-Eqab</i> (Heel Pain)
<i>Waja-ul-Qutm</i> (Low Back Pain)	<i>Hudbah</i> (Spinal Deformity)

Table 7. *Alamat* (Clinical Features)

Characters	<i>Waja-ul-Mafasil</i>	<i>Waja-ul-Mafasil</i>	<i>Waja-ul-Mafasil</i>	<i>Waja-ul-Mafasil</i>
	<i>Balghami</i> (Phlegmatic)	<i>Damvi</i> (Sanguineous)	<i>Safravi</i> (Bilious)	<i>Saudawi</i> (Melancholic)
<i>Onset</i>	Gradual	Abrupt	Sudden	Slow
<i>Nature of Pain</i>	Throbbing	Severe	Excruciating	Mild
<i>Swelling</i>	Marked	More marked	Marked	Moderate
<i>Touch</i>	Soft & Cold	Soft & Warm	Hard & Warm	Hard & Cold
<i>Skin over the joint</i>	whitish	Reddish	Red ting to yellowish	Bluish-Black
<i>Aggravating Factors</i>	Cold	Heat	Heat	Cold
<i>Relieving Factors</i>	Heat	Cold	Cold	Heat

Boul (urine), *Baraz* (stool)

Δ Signs/symptoms of the involved *khilt*

Δ If shifting pain is mild without heaviness and with severe distension, it indicates involvement of *Riyah*.

***Usool-e-Ilaj* (Line of Management)^{1,6,13}**

In initial stage, *Waja-ul-Mafasil* can be treated easily, but if it persists for a longer period, it becomes difficult to treat^{1,6}.

Izala-e-Sabab (Removal of cause)

Istifragh (evacuation of morbid material): Treatment of patient should be based on the concept of *Tanqia Mawade Raddiya* (evacuation of morbid matter), *Tadeel Mizaj* (rejuvenation of temperament), and *Taqwiat-e-Mafasil* (strengthening of joints). *Tanqiya* (evacuation) is achieved by *Munzij-wa-Mushil* therapy (concoction and purgation) and *Tadeel Mizaj* is by various drugs and regimenal modalities such as *Idrar* (diuresis), *Taareeq* (diaphoresis) *Qai* (emesis), *Fasd* (venesection), *Hijama* (cupping), *Huqna* (Enema), *Irsal-e-Alaq* (leech therapy), *Dalk* (Massage), *Nutool* (irrigation), *Abzan* (sitz

bath), *Amal-e-Kai* (cuaterization), *Hammam* (medicated bath) *Pashoya* (footbath), *Riyazat* (exercise), and *Takmeed* (fomentation) etc.

Taqwiyat-e-Mafasil (strengthening of the joint): It is achieved by various *Ghizai tadabeer*, regimenal modalities as well as single and compound drugs.

Taskeen-e-Alam (analgesia): It is advisable to use oral as well as local application drugs for relief of pain having medicinal properties such as *Musakkin* (analgesic), *Muhallil* (resolvent), *Qabiz* (astringent), *Raade* (Repellent), *Murakhkhi* (local relaxant) *Mukhaddir* (anaesthetics), *Munawwim* (hypnotics).

Regimenal Therapy

Hijama bish shart (wet cupping), *hijama-bila-shart* (dry cupping), *irsal-e-alaq* (leeching), *fasd* (venesection) *qai* (emesis), *huqna* (enema), *dalk* (massage) *nutool* (irrigation), *abzan* (sitz bath), *riyazat* (exercise), *takmeed* (fomentation), *hammam* (Turkish bath), *amal-i-kai* (cauterization), *pashoya* (footbath), etc.

Hijama (Cupping)

Hijama (Cupping therapy) is a simple, safe, tolerable, effective, economic and time-saving regimenal modality which is helpful in the treatment of aches and pains of limbs, head, neck, shoulders and back and has a potential to enhance the quality of life. Cupping therapy is classified as dry and wet cupping. Dry cupping is performed by applying cups over the skin creating negative pressure inside the cups through various methods including fire, manual pump or electrical suction and leave it up to 10-15 minutes which increases the blood and lymph circulation to the affected area, relieves painful muscle tension, effectively treats pain and also enhances a patient's quality of life and wellbeing¹⁴. In wet cupping, few superficial scarifications are made for evacuation of causative pathological substances from the interstitial spaces and blood circulation. Various clinical studies showed that dry cupping and wet cupping both were effective in the management of pain, stiffness, swelling and muscle weakness due to KOA.

Statistically significant improvement in pain, morning stiffness, joint swelling, restriction of movements, tenderness and muscular weakness after dry cupping in osteoarthritis/arthritis were reported^{9,15}. Efficacy of wet cupping in knee osteoarthritis was also reported^{16,17}.

Irsal-e-Alaq (Leech Therapy)

Irsal-e-Alaq or Medicinal leech therapy or hirudotherapy is a type of bloodletting procedure using blood sucking leeches which are attached to the skin with the purpose to gain the therapeutic benefits of secreted leech saliva while feeding¹⁸. More than 20 leech salivary molecules and their modes of action have been identified such as analgesic, anti-inflammatory, platelet inhibitory, anticoagulant, and thrombin regulatory functions, as well as extracellular matrix degradative and

antimicrobial effects¹⁹. It is commonly practiced procedure in regimenal therapy used for local evacuation of morbid humours using medicinal leeches to treat various disorders including *waja-ul-mafasil*^{20,21,22}. The effectiveness of this therapy may also be credited to the *Mussakin* (sedative) and *Muhallil* (anti-inflammatory) actions of saliva of leeches^{6,8}. Studies reported the effectiveness of leech therapy in patients of KOA^{21,22}.

Fasd (Venesection/Phlebotomy)

Fasd is one of the classical regimenal procedures in Unani system of medicine in which small incision with knife or scalpel is given to the superficial vessel and blood containing *mawad-e-fasida* (morbid material) is allowed to flow out that removes excess normal humours in the same proportion as present in the blood vessels or abnormal humour or both²³. It is also known as Phlebotomy, venepuncture, drawing of the blood, or taking blood for cleansing. Purpose behind this is evacuation and diversion of morbid humours from the body that helps in reducing congestion, swelling and acute pain in as often being seen in sciatic condition. This objective will be achieved through specified veins for different ailments⁶. This therapy is indicated in various musculoskeletal and other disorders^{1,2,6,7,8,12,24,25,26,27}.

Qai (emesis)

It is a simple and effective method of removing the *istehalati-akhlat-e-raddiya* (metabolic morbid humours) not only from the stomach but also from whole body through oral route by generating anti peristaltic movement with specific *Advia-e-Muqiyat* (emetics) for the purpose of treatment¹. Emetics work by producing gastric irritation, which stimulates the CNS or vomiting centre and causes reverse peristalsis. This regime has been

used by Unani physician from ancient times to treat certain body ailments like headache migraine, *junoon* (mania), melancholia, gastrointestinal disease, hepatic, kidney, skin disease, joint disorder, fever and others^{1,2,6,7,8,12,24,25,26,27}. Efficacy of *Qai*, *Munzij-wa-Mushil-e-Balgham* and *dalk* with *Roghan-e-Chobchini* in *Waja-ur-Rukbah* (knee osteoarthritis) was evaluated and reported that regimen is safe and effective with significant improvement in KOA²⁸.

Huqna (enema)

Huqna is a procedure of introducing a medicated liquid into the rectum and colon through the anus for various therapeutic purposes such as cleansing the bowels, stimulating the evacuation of bowels, etc.^{1,2,6,7,8,12,24,26,27}. Enema is avoided in extreme hot and cold weather, and in those persons having hot or cold temperament, during pregnancy, cough, sneezing, febrile and in weak persons. It should also be avoided by continuous and repeated use^{6, 23,24,26,27}.

Dalk (Massage)

In this procedure, affected part of the body is rubbed with hands using medicated oil by deploying different techniques which result in physiological, psychological therapeutic effects over the body and in diseased conditions to achieve the therapeutic, restorative and preventive goals. *Unānī* physicians included *dalk* in the category of *Riyazat*, on the basis of action. *Dalk* dissolves and removes *Akhlat-e-fasida* (morbid humours), liquefies the *Rutubat-e-badan* (body fluids), produces heat (*Latif Hararat*) in the body which removes *baroodat* (coldness) and dissolve *reehi-mawad* (gas) and strengthens the muscles, ligaments and tendons. It is helpful in evacuation and diversion of adhered viscous morbid matter accumulated inside the joints that

alleviate the pain, reduces swelling, excretes waste product (*fuzlat-e-badaniya*) that is formed at the end stage of digestion (*hazm-e-akhir*)^{25,26,27}. It is contraindicated in, chronic inflammation, pyosis, all types of fever, cardiovascular morbidities, thrombosis, Metastases, Bruise, Haemophilia, open wound, malignant growth, calcification²⁹. Massage is indicated in Tendinitis, Tenosynovitis, Fibrositis, Muscular spasm, Ligament sprain, Postsurgical scar, Postburn contracture, pre and postoperative scars in plastic and reconstructive surgery, Bell's palsy, Poliomyelitis, neurotmesis, Guillain-Barre syndrome³⁰. In Unani classical text, a different form of massage along with therapeutic oil is indicated in headache, chest and pulmonary disease, gastrointestinal disorder, hepatic and renal disorder, and musculoskeletal disorder^{1,2,8,12,25,26,27}.

Roghaniyat (Oils) used in *Waja-ul-Mafasil* are *Roghan-e-Baboona*, *Roghan-e-Dhatura*, *Roghan-e-Surkh*, *Roghan-e-Suranjan*, *Roghan-e-Gule Aak*, *Roghan-e-Malkangni*, *Roghan-e-Haft-e-Barg*, *Roghan-e-Kuchla*, *Roghan-e-Hina*, *Roghan-e-Zanjabeel*, *Roghan-e-Shibbat*^{31,32,33}. Efficacy of massage in knee osteoarthritis is reported in clinical studies^{34,35}. A study was conducted on 'Effect of *Dalk-e-Layyan Kaseer* with *Roghan-e-Shibbat* in slowing the progress of *Waja-ul-Unuq* (cervical pain)'. The regimen was found highly significant both statistically and clinically in relieving acute and chronic cervical pain³⁶.

Nutool (Irrigation)

Nutool is a procedure of continuous pouring or dripping of medicated oil or decoction or infusion of herbs over different parts of the body surface from pre-fixed height for a fixed period of time. *Ibne Sina* mentioned that *Nutool* is the best treatment for resolution of inflammation or

correction of altered body temperament and for providing strength to the affected organ, to relieve the pain. This therapy is useful in treating several body illnesses like CNS ailments (headache, amnesia, melancholia, epilepsy, vertigo, sleeplessness), eye disorder, musculoskeletal problems, sinusitis, kidney disease, hepatic disease, and others^{1,2,6,12,24,28} as mentioned in Unani textbooks. *Nutool* is useful commonly in anxiety, pain, depression, hypertension, sleeplessness and nervousness^{1,2,6,12,24}. Clinical studies conducted on sleeplessness, which revealed the effectiveness of this therapy^{36,37}.

Takmeed (Fomentation)

Takmeed is a therapeutic procedure of application of *har* (hot) or *barid* (cold) material over the body for therapeutic purposes³⁸. It has a number of therapeutic effects such as pain alleviation, muscle spasms relaxation, improvement in circulation, reduction in inflammation and improvement in the absorptive process from the body surface, promotion of perspiration, stimulation or inhibition the cutaneous nerve endings according to applied temperature^{24,39,40}. It is indicated in joint, spinal disorder, geriatric, kidney bladder disorder, gastrointestinal disorder, brain disorder, and others^{1,2,12,24}. In a meta-analysis, the assessors concluded that thermotherapy can be used as needed by the patients of rheumatoid arthritis as a palliative and adjunct therapy combined with exercises⁴¹.

Hammam (Turkish bath)

Hammam can be defined as a type of bath in which bather sweats freely in a set of three-room structure, maintained at progressive higher temperature started from *Barid-Ratab* room then *Har-Ratab* room and finally *Har-Yabis* room.

It is frequently used regimenal therapy which produces temperamental effect on the body according to chamber used. In normal healthy person cold bath (*Ghusl-e-barid*) is preferable and hot bath is usually applied for cure of disease. This therapy involves series of water-based treatment for body cleaning^{6,39,41,42}.

To achieve good results, patient is allowed to sweating in steam bath for 20 minutes followed by shifting of patient to massage room for massage therapy for specific duration, then patient enters in *hamam* room, where patient is supposed to sit in tub filled with medicated water of herbs for particular duration. If person feels restless, then procedure should be stopped. Finally, the patient moves to normal room for relaxation and is kept under observation for 15-20 minute for recording vitals parameters⁶. *Hammam* decocts the morbid fluids, opens skin pores, softens and dissolve the morbid fluids, halt the dysentery, reduces the fatiguing, releases excess perspiration, reduces the viscosity of humours, improve the quality of health, eliminate waste products through skin^{2,6,8,12,23,24,25,27,28}.

Hammam should be avoided on an empty stomach and is strictly prohibited in persons having *safrawi mizaj*, during pregnancy, fever and asthenia. It is advised 3 hours after taking meals. The temperature of water used for *hammam-e-har* (hot bath) should be between 92-97°F and for Turkish bath, the temperature should be 130°F. Prolonged stay in *hammam* should be avoided, as it causes restlessness³⁹.

Hammam is indicated in skin diseases, kidney diseases, gastrointestinal disease, spleen and hepatic problems, rheumatoid arthritis, gout, sciatica, cervical and lumbar spondylitis, CNS disorders like paralysis, muscle wasting and many others^{1,2,6,8,12,24,25,27,28}.

Zimad/ Tila (Medicated Paste/Liniments)

Zimad is a semisolid medicated preparation of botanicals used for local application over body surface.

Tila is medicated oil or liquid used externally with slow massage of body parts that absorbs medicine through skin. It is lesser in viscosity than lotion. Both *zimad* and *tila* has significant use in regimental therapy and are used for therapeutic purposes such as inflammation, swelling, sedation and anaesthesia, dissolution and diversion of morbid materials from congested area^{1,2,6,8,12,24,25,27,28,43}.

Conclusion

Knee osteoarthritis is not defined as such in the Unani literature as in conventional medicine, but discussed under a broad term *Waja-ul-Mafasil* which includes entire joint disorders such as inflammatory, non-inflammatory, infectious, metabolic and other musculoskeletal disorders. The treatment approach focuses on restoring the normal temperament, regulate the *Khilt* (humor) imbalance through *Imala* (diversion of morbid material) and *Istifraagh* (evacuation of morbid material) and to minimize morbidity and impairment. Such goals are achieved effectively by integrating both non-pharmacological and pharmacological treatment approaches. Taking into account the adverse effects of conventional medicine, it can be inferred that the Unani treatment uses an efficient treatment approach which is affordable and free of health risks to a full extent. Comprehensive literary analysis of *Waja-ul-Mafasil*, its definition, detailed classification, etiology, and multidimensional approach for management gives evidence to the real sense that Unani scholars handled this age-old disease carefully despite the constraints that existed at that time, which has been recorded in Unani

medicine's contemporary literature. To verify these arguments, numerous academic institutions are conducting the research studies on specific Unani formulations and regimen. The marvellous point of this strategy lies in the use of regimental therapies using fewer medications, which seems to be a blessing for disease prevention, control and cure in terms of being easy to conduct, cost-effective and at the same time free of any negative effects. As an adjuvant treatment, regimental therapies greatly reduce discomfort and have a profound impact on improving the quality of life. Therefore, once it enters a broader portion of the healthcare sphere and eventually helps the society, the purpose of this review will be entirely achieved.

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References

1. Khan A. Al Iksir (Urdu translation by Kabir-al-Din HM). New Delhi: Idara Kitab-us-Shifa. 2011.
2. Razi Z. Kitab-al-Hawi. Vol 11th. New Delhi: CCRUM. 2004.
3. Radha MS, Gangadhar MR. Prevalence of knee osteoarthritis patients in Mysore city, Karnataka. Int J Recent Sci Res. 2015 Apr;6(4):3316-20.
4. Zamri NA, Harith S, Yusoff NA, Hassan NM, Qian Ong Y. Prevalence, Risk Factors and Primary Prevention of Osteoarthritis in Asia: A Scoping Review. Elderly Health Journal. 2019;5(1):19-31.
5. Pereira D, Ramos E, Branco J. Osteoarthritis Acta Med Port. 2015;28(1):99-106.
6. Sina I. Al Qanoon Fi-al-Tib (Urdu translation by GH Kanturi). Vol 3rd. New Delhi: Idara Kitab-us-Shifa. YNM.

7. Jurjani AH. Zakhira Khwarizam Shahi(Urdu translation by Khan HHH). Vol 6. New Delhi: Idara Kitab-us-Shifa. 2010.
8. Majusi A. Kamil-al-Sana (Urdu translation by GH Kanturi). Vol 2nd. New Delhi: Idara Kitab-us-Shifa. 2010.
9. Nayab M, Anwar M, Qamri MA. Clinical study of Wajaul-Mafasil and evaluation of efficacy of Hijamat-Bila-Shart in the treatment. Indian J. Tradit. Knowl. 2011 Oct; 10 (4):697-701.
10. Mohammad SH, Fasihuzzaman JA, Siddiqui MA. Management of *Wajaulmafasil* (Arthritis) in Unani system of medicine: A review. Int. J. Res. Ayurveda Pharm. 2014;5(1):60-4.
11. Arzani A. Tibb-e-Akbar. Deoband: Faisal Publications. YNM.
12. Baghdadi H. Kitab-al-Mukhtarat fi-al-tib. Vol IV. New Delhi: CCRUM. 2007.
13. Anonymous. *Wajaul-Mafasil*. Standard Unani treatment guidelines for common disease. Vol.1. New Delhi: CCRUM. 2014.
14. Lauche R, Cramer H, Choi KE, Rampp T, Saha FJ, Dobos GJ, et al. The influence of a series of five dry cupping treatments on pain and mechanical thresholds in patients with chronic nonspecific neck pain- a randomised controlled pilot study. BMC Complement Altern. Med 2011;11(63):1-11.
15. Nighat A, Shakir J, Abdul H, Jamal A, Bilal A. Clinical efficacy of *Hijamat*(Cupping) in *Waja ul MafasilMuzmin* (arthritis). Indian J. Tradit. Knowl.. 2005; 4(4):412-415
16. Sheikh Haneef Mohammad. Therapeutic evaluation of Hijamat Bish Shart in the Treatment of Knee Osteoarthritis. New Delhi: Faculty of Medicine (Unani), Jamia Hamdard, 2012.
17. Ehsan Ahmad. Hijamat bish Shurt in combination with Unani formulation for Waja ul Mafasil. New Delhi: Department of Moalijat (Medicine), Faculty of Medicine (U), Jamia Hamdard, 2006.
18. Eldor A, Orevi M, Rigbi M. The role of the leech in medicaltherapeutics. *Blood Rev* 1996; 10:201–9.
19. Hildebrandt JP, Lemke S. Small bite, large impact–saliva and salivary molecules in the medicinal leech, *Hirudo medicinalis*. *Naturwissenschaften*. 2011;98(12): 995–1008.
20. Grunner OC. The Canon of Medicine of Avicenna. London: First Book, Luzac & Co., 1930.
21. Zaidi SMA, Jamil SS, Sultana A, ZamanF, Fuzail M. “Safety and efficacy of leech therapy for Symptomatic knee osteoarthritis using Indian medicinal leech. Indian J. Tradit. Knowl. 2009; 8 (3):437-442.
22. Michalsen A, StefanieK, Lüdtker R, Moebus S, Spahn G, Dobos GJ. Effectiveness of Leech Therapy in Osteoarthritis of the Knee: A Randomized, Controlled Trial. *Ann Intern Med*. 2003 Nov 4; 139(9):724–730.
23. Mazhar H, Shah TPK. The General Principles of Avicenna’s, Canon of Medicine, Pakistan: Naveed Clinic. 1998.
24. Tabri R. Firdous-ul-Hikmat. New Delhi: Idarar Kitab-ul-Shifa. 2010.
25. Ibn Rushd. Kitāb al-Kulliyāt (Urdu translation by Siddique MA). Lahore: Maktaba Daniyal. 2017.
26. Nafis B. *TarjumawaSharahKulliyat-i-Nafsi* (Urdu translation by Kabīr-al-Dīn HM). New Delhi: Idara Kitab-us-Shifa. 1994.
27. Sīnā I. *Kulliyā-ī-Qānūn* (Urdu translated by Kabīr al-Dīn HM). New Delhi: Ejaz Publishing House. 2006.
28. Mohammad SA, Ansari AN. Efficacy of Qai, *Munzij wa Mushil-e-Balgham* and *dalk* with *Rohan-e-chobchini* in *Wajaur-Rukbah* (Knee osteoarthritis). *IJRAR*. 2020;7(1):887-906.
29. Vishnu ND, *Alternative Therapies for Medical Professionals*. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd. 2008.
30. Sinha AG. *Principles and Practice of Therapeutic Massage*. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd. 2004.

31. Mohammad Kabiruddin. Al-Quarabadeen. 3rd Ed. NewDehli: CCRUM. 2006.
32. Mohammad Kabiruddin. *Bayaze Kabeer*. New Dehli: Idara Kitab-us-Shifa. 2010.
33. Anonymous. *Qarabadeene Majidi*. New Delhi: All India Tibbi Conference Ajanta offset & Publication. 1996.
34. Perlman AI, Ali A, Njike VY, Hom D, Davidi A, Gould-Forgerite S, et al. Massage therapy for osteoarthritis of the knee: a Randomized Dose-Finding Trial”, *PLoS ONE*. 2012; 7(2): 1-9.
35. D. V. Atkins and D. A. Eichler, “The effects of self-massage on osteoarthritis of the knee: a randomized, controlled trial,” *Int J Ther Massage Bodywork*. 2013; 6(1): 4–14.
36. Roohi Azam, Shafia Mushtaq, Fasihuzzaman, Azhar Jabeen, Zehra Zaidi, Shah Alam. *Nutool* (Irrigation)-An Effective Mode of Treatment in *Ilaj-bil-Tadbeer* (Regimental Therapy). *IJPR*. 2014: 4(12).
37. Khan S, Nayab M, Ansari RA, “Effect of *Nutool* with *Roghan-e-Banafsha* in *sahar* (primary insomnia)” *IJRAR*. 2019; 6(1):1271-81.
38. Khan JA, *Ilaj Bit Tadbeer*: Aligarh.2011.
39. Hamid A. *Ilaj-bil-tadbeer* (regimental therapy): A noble method of treatment in Unani medicine: A review. *Int. J. Med. Res*. 2018;3(3):01-6.
40. Raheem A, Nazli T, Saeed A, Alvi R, Kalaivani M. Effectiveness of Fire Cupping (Hijamah Nariya) versus dry warm Fomentation (*Takmeed Yabis*) in Chronic Neck Pain - A Randomized Control Trial. *J Integ Comm Health*.2019; 8(1): 21-32.
41. Brosseau L, Robinson V, Pelland L, Casimiro L, Milne S, Judd M, Wells G, Tugwell P, Shea B. Efficacy of thermotherapy for rheumatoid arthritis: A meta-analysis. *Phys. Ther. Rev*. 2002 Mar 1;7(1):5-15.
42. Mansoor A. Ghina Mana (Urdu translation by Kantoori GH). New Delhi: CCRUM; 2008.
43. Razi MZ. *Kitab al-Mansoori* (Urdu translation by CCRUM). New Delhi: Dept. of AYUSH, Ministry of H & FW, Govt. of India; 2002.

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