



A Comprehensive Review Of Unani Therapeutics For Osteoarthritis

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Abstract:

Osteoarthritis (OA) is a prevalent degenerative joint disease affecting millions worldwide, causing pain, stiffness, and reduced mobility. Unani medicine, an ancient healing system originating from Greco-Arabic traditions, offers a holistic approach to manage OA symptoms. This paper provides a comprehensive review of Unani therapeutics for OA, encompassing historical background, etiology according to Unani philosophy, diagnostic principles, and evidence-based treatment modalities. Through an analysis of recent scientific studies and traditional Unani texts, this review evaluates the efficacy and safety of commonly used Unani interventions, including herbal formulations, dietary recommendations, lifestyle modifications, and physical therapies. Additionally, challenges and future directions in integrating Unani medicine with conventional approaches for OA management are discussed.

Key words:-Unani medicine, osteoarthritis, Waja-ul-Mafasil, traditional medicine, herbal therapy, Ilaj bil-Tadbeer, anti-inflammatory agents, regimenal therapy, joint disorders, complementary and alternative medicine.

Introduction:

Osteoarthritis (OA) is a chronic degenerative joint disorder characterized by progressive cartilage degradation, synovial inflammation, and subchondral bone changes, leading to pain, stiffness, and functional impairment.⁴ Globally, OA is a leading cause of disability and imposes a substantial economic burden on healthcare systems.⁷ Conventional treatments for OA primarily focus on symptom management and include analgesics, nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroid

injections, and surgical interventions such as joint replacement.³ However, these approaches are often associated with adverse effects and do not address the underlying pathophysiology of OA. In contrast, Unani medicine, an ancient healing system rooted in Greco-Arabic traditions, offers a holistic framework for managing OA by restoring the balance of bodily humors and enhancing self-regulatory mechanisms.⁵ This review aims to provide an in-depth analysis of Unani therapeutics for OA, shedding light on its historical evolution, theoretical principles, diagnostic methods, and evidence-based treatment strategies.

Historical Evolution of Unani Medicine:

Unani medicine, also known as Greco-Arabic medicine or Tibb-e-Unani, traces its origins to the teachings of Hippocrates (460–377 BCE) and Galen (129–c. 200 CE) (Haque, 2004). The term "Unani" refers to the Greek influence on this system, which flourished during the Golden Age of Islamic civilization, particularly in regions such as Persia, India, and the Middle East.⁹ Unani medicine integrates elements of Greek, Persian, Indian, and Islamic medical traditions, emphasizing the holistic relationship between the body, mind, and spirit.² Central to Unani philosophy is the concept of the four humors (blood, phlegm, yellow bile, and black bile) and their equilibrium, which governs health and disease (Zaidi et al., 2020).⁵ The synthesis of diverse medical knowledge in Unani medicine led to the development of sophisticated diagnostic methods and therapeutic interventions tailored to individual constitution and disease pathology.

Etiology of Osteoarthritis in Unani Medicine:

According to Unani principles, osteoarthritis (Waja' al-mafāṣil) results from an imbalance in the humoral constitution, leading to the accumulation of morbid material (Saudā') in the affected joints.⁸ Predisposing factors such as dietary indiscretion (Ghiza), sedentary lifestyle (Sukoonat), and climatic influences (Mizaj) disrupt the equilibrium of humors and impair physiological functions, predisposing individuals to OA.³⁴ Additionally, Unani physicians recognize the role of constitutional factors (Tabi'iyya) and genetic predisposition (Fitriyya) in the pathogenesis of OA.⁸ Understanding the etiological factors of OA in Unani medicine enables targeted interventions aimed at restoring humoral balance and eliminating morbid material through detoxification therapies (Tadbeer).

Classification of Waja-ul-Mafasil (Arthritis): A Comparative Overview in Unani and Modern Medicine

Waja-ul-Mafasil, a classical term in Unani medicine, broadly refers to joint disorders characterized by pain, inflammation, and stiffness of the joints. The condition is comparable to what is described as arthritis in modern medicine. Osteoarthritis (OA) is one of the most prevalent types of arthritis and a significant cause of disability worldwide. Both Unani and modern medicine recognize arthritis as a multifactorial condition, and its classification plays a crucial role in diagnosis and therapeutic management.

The traditional Unani system offers a detailed etiological and humoral-based classification of Waja-ul-Mafasil, which, when integrated with contemporary scientific understanding, can provide a comprehensive approach to patient care. This section elaborates on the classification frameworks in both systems and highlights their relevance in current clinical practice.

Unani Classification of Waja-ul-Mafasil

Unani scholars have classified Waja-ul-Mafasil based on several principles, primarily rooted in the theory of *Umoor-e-Tabi'iyya* (natural principles) and *Mizaj* (temperament). The classification includes the following major criteria:¹¹

1. According to the Nature of Morbid Matter (Madda):

- **Sue Mizaj Sada (Non-material Derangement):**-This type arises due to an imbalance in the temperament (*Mizaj*) without the presence of any pathological matter. Contributing factors include exposure to cold, sedentary lifestyle, or improper diet. The symptoms are usually mild to moderate pain and stiffness, with no evident swelling.
- **Sue Mizaj Maddi (Material Derangement):**-This involves the accumulation of pathological morbid matter (*Madda*) within the joints. The pain is accompanied by swelling, redness, and sometimes warmth over the affected joints. It often corresponds to inflammatory arthritis in modern terms.^{12,13}

2. According to the Involved Humors (Akhlat):

Based on the dominant humor involved, Waja-ul-Mafasil is subdivided into the following types:

- **Waja-ul-Mafasil Balghami (Phlegmatic):**-Caused by the predominance of phlegm (*Balgham*), this type manifests with stiffness, heaviness, and pain especially aggravated in cold and damp conditions. It closely resembles osteoarthritis or degenerative joint disease.¹⁴
- **Waja-ul-Mafasil Damvi (Sanguineous):**-Triggered by an excess of blood (*Dam*), this form is associated with swelling, redness, and a burning sensation. It mirrors the presentation of conditions like acute rheumatoid arthritis.¹⁵
- **Waja-ul-Mafasil Safravi (Bilious):**-Associated with the humor *Safra* (yellow bile), this type is inflammatory in nature with severe pain, heat, and often redness, resembling gout or flare-ups of rheumatoid arthritis.¹⁶
- **Waja-ul-Mafasil Saudavi (Melancholic):**-This type results from the accumulation of *Sauda* (black bile). It typically presents as chronic joint pain with deformity and functional impairment, often akin to advanced stages of osteoarthritis or chronic rheumatoid arthritis.¹⁷

3. Based on the Number of Humors Involved:

- **Waja-ul-Mafasil Mufrad (Simple):**-This category includes joint disorders caused by the derangement of a single humor. For instance, if only *Balgham* is involved, it will be termed as Waja-ul-Mafasil Balghami. The symptomatology is often more localized and easier to manage.
- **Waja-ul-Mafasil Murakkab (Compound):**-This occurs due to the combined derangement of two or more humors. For example, a combination of *Dam* and *Safra* may result in a more complex clinical presentation, requiring a multi-pronged treatment approach.¹⁸

Modern Classification of Osteoarthritis and Related Joint Disorders

Modern medicine classifies osteoarthritis primarily based on its etiology and the pattern of joint involvement. The classification is broadly categorized as:

1. Primary Osteoarthritis (Idiopathic):

This type develops without any apparent underlying cause and is age-related. It is further sub-classified as:

- **Localized Primary Osteoarthritis:**

Involves specific joints such as:

- **Hands** – common in post-menopausal women, with nodal changes
- **Hips** – often bilateral and may show eccentric or concentric wear patterns
- **Knees** – the most frequently affected joint; can be medial, lateral, or patellofemoral
- **Spine** – typically involves apophyseal joints, causing spondylosis

- **Generalized Primary Osteoarthritis:**

This involves multiple joints both in the axial and appendicular skeleton, often with a familial predisposition.^{19,20}

- **Erosive Osteoarthritis:**

A subset of hand OA that presents with both degenerative and inflammatory features, often leading to joint erosion and deformity.²¹

2. Secondary Osteoarthritis:

Secondary OA arises due to identifiable underlying causes, including:

- **Congenital and Developmental Disorders:**

Includes bone dysplasias, congenital dislocations, and deformities.

- **Post-Traumatic or Post-Surgical Changes:**

Previous injuries, ligament tears, or surgeries like meniscectomy may predispose joints to early degeneration.²²

- **Endocrine Causes:**

Conditions like diabetes mellitus, acromegaly, hypothyroidism, hyperthyroidism, and Cushing's syndrome.

- **Metabolic and Genetic Disorders:**

Includes diseases such as hemochromatosis, ochronosis, gout, pseudogout, Wilson's disease, and lysosomal storage disorders like Hurler and Gaucher syndromes.^{23,24}

Clinical Relevance of Classification in the Present Scenario

Unani Medicine Perspective:

The Unani classification of Waja-ul-Mafasil remains clinically relevant, especially in the context of personalized medicine. Understanding the patient's *Mizaj* and identifying the dominant humor helps in customizing therapeutic strategies, which include:

- **Ta'deel-e-Mizaj (Correction of Temperament):**

Therapies are directed at restoring the natural balance of the body, using diet, regimental therapy (*Ilaj bil Tadbeer*), and lifestyle modifications.^{25,26}

- **Tanqiya-e-Madda / Istifragh-e-Madda (Evacuation of Morbid Matter):**

Includes methods like *Fasd* (venesection), *Hijama* (cupping), and purgation to eliminate excess humors from the body.^{27,28}

- **Dalak (Massage Therapy):**

Promotes circulation, reduces stiffness, and improves joint mobility.²⁹

These principles are particularly valuable in chronic and degenerative conditions where modern pharmacological interventions may be limited by side effects.

Modern Medicine Perspective:- Modern classification assists in targeted diagnostic and therapeutic approaches. For instance:

- **Radiological Assessment:**

X-rays, although still the mainstay, are now supplemented with MRI and CT scans to detect early cartilage loss and subchondral changes.

- **Biochemical and Molecular Markers:**

Help in identifying inflammatory processes in erosive and secondary OA.^{30,31}

- **Precision Medicine:**

Classification helps clinicians identify genetic, biomechanical, and metabolic contributors, allowing for individualized treatment planning.^{32,33}

Diagnostic Principles in Unani Medicine:

Unani diagnosis of OA encompasses a comprehensive assessment of signs and symptoms, constitutional temperament (Mizaj), pulse examination (Nabz), urine analysis (Baraz), and clinical examination (Tahqiq).⁵ The identification of humoral imbalances, tissue morbidities (Akhlat), and metabolic disturbances (Arkaan) guides the selection of appropriate therapeutic modalities tailored to individual needs.⁸ Unani physicians employ a combination of observational skills, palpation techniques, and interpretative reasoning to ascertain the underlying cause of OA and formulate personalized treatment regimens.

Treatment Modalities in Unani Medicine:

Unani therapeutics for OA encompass a multimodal approach, including pharmacotherapy, dietetics, regimenal therapy, and physical interventions³⁴ Herbal formulations (Jawarish, Majoon, Khamira) containing anti-inflammatory, analgesic, and chondroprotective agents such as *Boswellia serrata*, *Withania somnifera*, and *Zingiber officinale* are commonly prescribed to alleviate pain and improve joint function.³⁵ Dietary recommendations emphasize the consumption of anti-inflammatory foods (Mufarradat) rich in omega-3 fatty acids, antioxidants, and micronutrients to mitigate OA progression.⁵ Regimenal therapies (Ilaj bil-Tadbir) including massage (Dalk), cupping (Hijama), and fomentation (Iltihaam) promote circulation, reduce stiffness, and enhance joint mobility.³⁶ Furthermore, lifestyle modifications such as weight management, physical activity, and stress reduction techniques play a crucial role in managing OA symptoms and improving overall well-being.⁵

Evidence-Based Evaluation of Unani Therapeutics:

Recent scientific studies have provided evidence supporting the efficacy and safety of Unani interventions for OA management. For example, a randomized controlled trial demonstrated the analgesic effects of a Unani herbal formulation containing *Boswellia serrata*, *Commiphora mukul*, and *Withania somnifera* in patients with knee OA.¹⁰ Similarly, a systematic review highlighted the anti-inflammatory properties of *Zingiber officinale* in reducing pain and improving physical function in OA patients. However, further well-designed clinical trials are warranted to validate the efficacy of Unani treatments and elucidate their mechanisms of action in OA pathophysiology.³⁷

Challenges and Future Directions:

Despite the growing interest in integrating traditional medicine systems like Unani with conventional approaches for OA management, several challenges persist. These include standardization of herbal formulations, training of healthcare providers, integration of Unani diagnostics with modern diagnostic modalities, and regulation of traditional medicine practices.³⁴ Future research endeavors should focus on collaborative efforts between Unani practitioners, biomedical scientists, and regulatory authorities to develop evidence-based guidelines, conduct rigorous clinical trials, and promote the safe and effective use of Unani therapeutics in OA care.

Integrative Insight and Future Directions

The classification systems of both Unani and modern medicine complement each other in understanding the pathophysiology of joint disorders. Where modern medicine excels in diagnosis and acute management, Unani medicine contributes to long-term health restoration through its holistic and humoral approach. Recognizing these synergies is essential for developing integrative treatment models in the current scenario.

The growing incidence of lifestyle-related disorders, sedentary habits, and aging populations make osteoarthritis and related joint issues more prevalent. In this context, the Unani approach offers viable preventive strategies through temperament-based diet and exercise regimens, while modern classifications provide a diagnostic framework for precise intervention.

Conclusion:

In conclusion, Unani medicine offers a holistic approach to managing osteoarthritis by addressing the underlying imbalances in humoral constitution and promoting self-healing mechanisms. Through a combination of herbal remedies, dietary modifications, lifestyle interventions, and physical therapies, Unani physicians aim to alleviate pain, improve joint function, and enhance the overall quality of life for OA patients. Although further research is needed to validate the efficacy of Unani therapeutics and overcome existing challenges, the integration of Unani medicine with conventional approaches holds promise for optimizing OA care and reducing the global burden of this debilitating condition.

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