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Review Article

A Panoramic view of most commonly used Regimenal Modalities (*Tadabeer*) for joint pain in *Unani* System of Medicine: A Critical Review

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Abstract

Pain in joints (*Waja ul Mafasil*) is a major clinical problem that may or may not be associated with inflammation. Researchers and Clinicians are rigorously working to find out the best treatment modality in the management of joint pain. *Unani* physicians claimed the management of various joint disorders with the help of several *Tadabeer*. The objective of this critical review is to address the claims of *Unani* physicians and clinical studies conducted on the efficacy of *Dalk* or *Hijama* in the management of joint pain. Classical *Unani* literature, peer-reviewed journal articles and RCTs that predominantly focused on the use of regimenal modalities (*Hijama* and *Dalk*) in the joint pain were included in this review. Several published studies claiming the effect of *Dalk* and *Hijama* by Unani physicians, showing significant improvement, were included along with the literature. Various published clinical trials showed the effect of *Dalk* and *Hijama* in the management of joint pain, though, the effect showed by some clinical trials was short term. Hence, rigorous, controlled, randomized, blinded, and long duration follow up studies on large sample size are to be conducted by trained clinicians or researchers to establish the efficacy of *Dalk* or *Hijama* in the management of musculoskeletal disorders (MSDs).

Keywords: *Dalk*; *Hijama*; *Waja-ul-Mafasil*; Joint Pain; Musculoskeletal Disorders; *Unani*

INTRODUCTION

In the present era, researchers & clinicians all over the world have shown great concern regarding alternative medicine [1]. The alternative medicine includes the *Unani* System of Medicine which has a very rich historical background. It has journeyed through many countries and people. It strives to find the best possible ways by which a person can lead a healthy life [2]. ***Ibne-Sina*** (980-1037AD) has prioritized the principle of treatment as follows: "Indeed the treatment is completed by one of the three methods, first of which is ***Tadbeer*** (Regimen) and ***Taghzia*** (Nutrition), second is the use of ***Advia*** (Drugs) and the third one is the use of ***Amal-e-Yad*** (Surgery)" [3,4].

Ilaj-bit-Tadbeer is one of the principles of treatment in the *Unani* system of medicine which should be applied as the first line of treatment followed by the rest if required. It includes procedures like *Fasd* (venesection), *Hijamah* (cupping), *Dalk* (Therapeutic Massage), *Hammam* (Turkish bath), *Irsal-e-Alaq* (leech therapy), *Ishal* (Purgation), *Qai* (Emesis), *Riyazat* (Exercise), *Tareeq* (Diaphoresis), *Nutool* (Irrigation), etc. *Tadbeer* is an Arabic word meaning regimen or systemic plan, whereas *Ilaj* means therapy or treatment. So, *Ilaj-bit-Tadbeer* means treatment through regimens. In this method of treatment, various procedures are performed for the moderation or modification in *Asbab-e-Sitta Zarooriya* (six essential factors) to restore health of unhealthy individuals or to maintain health in healthy individuals [5].

Hijama is a physical regimenal modality used by *Unani* physicians and other therapists. Now a days a glass, plastic, or bamboo cup is used to create suction over the skin of the designated body part for the treatment. There are two types of *Hijama* therapy; *Hijama Bila Shart* (Dry Cupping); *Hijama bish Shart* (Wet Cupping). In *Hijama Bila Shart*, the cups are placed on intact skin under the effect of negative pressure created either by the fire or suction pump without drawing any blood into the cup while in *Hijama bish Shart*, the skin is lacerated so that blood can be drawn into the cup [6,7].

Throughout the history of medicine, *Dalk* has been used not only by the unhealthy but also by healthy individuals for therapeutic, restorative as well as preventive purposes. *Dalk* is considered a type of *Riyazat* in the *Unani* System of medicine [8]. Eminent *Unani* physicians advised the use of *Dalk* for preventive as well as curative intentions in various body ailments. *Dalk* can be defined as a type of exercise practiced with palm and digits by a skilled person on the surface of the body in a number of ways to dissolve the *Akhlat-e-Fasida* and to assist the *Quwa* (Faculties) for therapeutic and preventive measures [9]. *Dalk* is generally used, to relieve pain from musculoskeletal disorders and cancer, rehabilitate sports injuries, reduce stress, increase

relaxation, decrease feelings of anxiety and depression, and aid in general wellness [9].

Musculoskeletal disorders (MSDs) is a worldwide health problem resulting in negative effect on individuals' well-being and a substantial burden to society [10]. The most common musculoskeletal disorders include osteoarthritis, rheumatoid arthritis, cervical spondylosis, lumbar spondylosis, etc. These disorders are the main cause of disability among occupationally active adults which lead to human suffering, work absenteeism, and reduced work productivity [12, 13]. Inflammatory joint disorders such as rheumatoid arthritis is one of the main causes of joint pain in younger age group whereas elderly people mainly suffer pain due to degenerative problems such as osteoarthritis [11]. MSDs often have a multifactorial origin and risk factors [14]. Most of the MSDs are often resistant to current modalities of management [12, 15]. In *Unani* System of Medicine, *Waja-ul-Mafasil* is a term that encompasses pain in all the joints especially big joints. The pain may have specific names according to the joints or sites involved e.g. when the pain starts from the hip and radiates down the length of the leg then it is called as *Irq-un-Nasa* (sciatica), and when it appears in the foot or big toe, it is named as *Niqris* (Gout) [16,17,18]. According to *Akbar Arzani, Waja-ul-Mafāsil* is a joint pain that may or may not be associated with inflammation due to the presence of *Sue-Mizaj Sada* or *Maddi* [19].

METHODOLOGY

Hijama (Cupping Therapy) and *Dalk* (Massage Therapy) are the two most commonly used regimenal modalities in the management of *Waja-ul-Mafasil* (Joints Pain) in the *Unani* System of Medicine. Keeping this fact in view, we included these two therapies. Peer-reviewed journal articles and RCTs that predominantly focused on the use of regimenal modalities (*Hijama* and *Dalk*) in joint pain were included in this review. The terms joint pain, musculoskeletal disorder, regimenal therapies (*Dalk*, *Dalak*, massage, *Hijama*, *Hijamah*, *Hijamat*, Cupping therapy, *Irsale Alaq*, *Taleeq*, Leeching, *Hammam*, Sauna Bath, Steam fomentation, *Takmeed*, Fomentation, *Nutool*, Irrigation) combined with joint pain or *Waja ul Mafasil* were used for search. The *Unani* literature has been taken from classical *Unani* treatises such as *Kitab al-Hawi fit Tibb* by *Razi*, *Alqanoon Fit Tibb* by *Ibne Sina*, *Tibb-i-Akbar* by *Akbar Arzani*, *Akseer-i-Azam* by *M. Azam Khan*, *Zakhira Khawarzam Shahi* by *Ismail Jurjani*, *Makhzane Hikmat Kamil* by *Jeelani*, *Gina Muna* by *Al-Quamri.* Various relevant published works both review and RCTs were searched using the online free availability.

RESULTS

Razi in *Al Hawi* mentioned the treatment of *Irq-un-Nasa* (Sciatica) that "if thick and hard morbid material gets accumulated in the hip, *Hijama* becomes necessary" [20].

3000 BCE.	**700 BCE.**
The Cong Fou of Tao-Tse in China describes the use of medicinal plants, exercise, and **anmo** or **amma (Physical Therapy or Massage)** for the maintenance of health.	The Greek physician, ***Asclepius***, founded the first gymnasium where *Riyazat* and *Dalk* were combined to promote health.

In *Gina Muna, Jalinoos* mentioned that *Hijama* is very beneficial if the cause of joint pain is accumulation of *Khilt-i-Ghaleez*. *Qusta* recommended *Dalk* in back pain with compound oil formulation like *Roghan-i-Zaitoon* and *Aab-i-Karela*. He further added that if heat is to be provided to an area, *Dalk* should be done [21].

Effectiveness of *Hijama* (cupping therapy) in painful condition of joints

Farhadi K et al. studied to determine the efficacy of *Hijama bish Shart* (wet cupping) for treating non-specific low back pain. It was a randomized controlled clinical trial with two parallel groups. The authors reported a significant improvement in pain in favor of *Hijama bish Shart* [22]. In another study, Hanan S.A & Eman S.E reported the highly statistically significant effect of *Hijama bish Shart* in the treatment of lower back pain and improvement in activities of daily living. The authors recommended the use of *Hijama bish Shart* for reducing disability and pain of the lower back [23]. Jong-In Kim et al conducted a randomized, waiting-list controlled, open-label, parallel-group pilot trial to evaluate the efficacy of *Hijama bish Shart* (Wet-Cupping) for persistent Non-Specific low back pain and reported a decrease in numerical rating score (NRS) {-16.0 (95% CI: -24.4 to 7.7) in wet cupping group and -9.1 (-18.1 to 0.1) in the waiting-list group}, but there was no statistical difference between the two groups (p=0.52). However, the McGill Pain Questionnaire for pain intensity (PPI) score showed significant differences between the two groups (-1.2 [-1.6 to -0.8] for the wet cupping group and -0.2 [0.8 to 0.4] for the waiting-list group, p<0.01). Further, the authors claimed the less intake of acetaminophen use in the wet-cupping group [24]. Khan A. A et al conducted a randomized controlled clinical trial to find out the effect of cupping therapy in the management of knee osteoarthritis. Total 11 sittings of *Hijama Bila Shart* (Dry Cupping) were performed. The authors reported statistically significant improvement in knee osteoarthritis particularly in relieving pain, edema, stiffness, and disability [25]. Michael Teut et al performed a randomized controlled exploratory trial to evaluate the efficacy of pulsatile dry cupping in patients with osteoarthritis of the knee. The researchers reported that the WOMAC global score improved significantly more in the cupping group with a mean of 27.7 (95% CI 22.1; 33.3) in comparison to the control group (p=0.001). However, the WOMAC sub-scores for pain and stiffness were not significant [26]. Romy Lauche et al reported the influence of dry cupping therapy on pain and mechanical threshold in patients with chronic non-specific neck pain in a randomized controlled pilot study. The authors claimed that the patients of the treatment group had significant improvement in pain score after receiving cupping therapy than patients of the waiting-list control group [27].

Effectiveness of *Dalk* (Massage Therapy) in painful condition of joints

Dalk (Massage) is a very effective modality for the modification of *Ḥarkat wa Sukūn-i-Badnī*; one of the *Sabab* among *Asbāb-i-Sitta Ḍarūriya* (Six Essential Factors). It is considered as a part of *Riyāḍat* (exercise) [3, 4]. Adam I. Perlman et al conducted a randomized dose-finding trial to evaluate the efficacy of massage therapy for osteoarthritis of the knee. The authors reported that WOMAC Global score improved significantly in the 60-minutes massage group compared to the usual care group at the primary endpoint of 8-weeks. WOMAC subscales of pain and functionality, as well as the visual analogue pain scale also demonstrated significant improvement in the 60-minute therapy compared

to usual care [28]. Dorothea A. Atkins conducted a randomized controlled clinical trial to evaluate the effects of self-massage on osteoarthritis of the knee. The authors reported that between-group analyses of WOMAC pain, stiffness, function subscales, and total WOMAC scores revealed a significant difference between groups ($p<0.050$). No significant difference was reported in the range of motion [29]. Karen J Sherman et al conducted a randomized trial on therapeutic massage for chronic neck pain and found that the participants experienced clinically significant improvement on the Neck Disability Index (NDI). The study suggested that massage is safe and has clinical benefits for treating chronic neck pain [30].

DISCUSSION:

The Global Burden of Disease 2010 Study shows that musculoskeletal diseases are the fourth greatest burden on health throughout the world, causing 21.3% of years lived with disability [31]. *Ibn-ul-Quf* has mentioned *Hijāma* vividly in his book *Al-umdah-fil-jarāhat.* According to him if morbid material is to be evacuated from the superficial part of the body, *Hijama* should be taken into consideration [32]. Several studies conducted on *Hijama* in the management of pain were compared with various types of control interventions, concentrated on cutaneous nociception which is Undoubted as per the claims made by *Unani* physicians. Few rigorous clinical trials have been conducted to find out the efficacy of *Hijama* as a monotherapy in the management of joint pain. The evidence collected from clinical trials and *Unani* literature seems positive for these therapies. All the data provided suggest the effectiveness of *Hijama* compared with other treatments.

Dalk is one of the earliest therapeutic tools used to relieve pain [33, 34]. With its popularity for pain relief and recovery of function, it has become a widely accepted regimenal modality for musculoskeletal disorders [35, 36].

CONCLUSION:

Most of the interventional studies using *Hijama* or *Dalk* in the management of pain have shown significant improvement. An approach that focuses on a healthy lifestyle & the use of regimenal modalities especially *Hijama* and *Dalk*, is important to restore and maintain function, to improve participation in the long term, and to provide a management plan instead of a cure. Very few attempts have been made to evaluate the efficacy of *Dalk* and *Hijama* in the management of MSDs. Only a few studies are available but are either uncontrolled or have poor methodological quality. The studies performed on *Hijama* and *Dalk* show a short-term effect in the management of joint disorders.

It is still believed that the regimenal modalities provide a strong basis for the management of persistent musculoskeletal disorders and may also contribute to the long term prevention of these conditions, but it cannot be concluded that the effect of *Dalk* or *Hijama* is superior to other treatment modalities, as the results obtained from the previous studies are mixed ones. Hence, we suggest rigorous, controlled, randomized, blinded, and long-duration follow-up studies on large sample size, to be conducted by trained clinicians or researchers to establish the efficacy of *Dalk* or *Hijama* in the management of MSDs.

Conflict of Interest:

The authors declare no conflict of interest.

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