Evidence-Based Therapeutic Benefits of Cupping Therapy (払い戻し療法): A Comprehensive Review

Hina V Kouser 1, Mohd Nayab 2*, Ayesha Tehseen 3, Shaista Mahfooz 4, Baig Ruqaiyya 5, Mohd Anwar 6

1,2 PG Scholar, Dept. of Ilaj bit Tadbeer, NIUM, Bengaluru, India
3 Assistant Professor, Dept. of Ilaj bit Tadbeer, NIUM, Bengaluru, India
4 PG Scholar, Dept. of Tahaffuzi wa Samajti Tib, NIUM, Bengaluru, India
5 PG Scholar, Dept. of Ilmaj al Saida, NIUM, Bengaluru, India
6 Professor & Chairman, Dept. of Ilaj bit Tadbeer, AKTC, AMU, Aligarh, India

Abstract

Ilaj bi’t tadbeer (regimenal therapy) is one of the preferred treatment methods used in Unani system of medicine since ancient times. Hijama is one of the effective modalities of treatment in Ilaj bi’t tadbeer. It is a unique therapeutic procedure in which cup like vessels are placed on the body surface by creating a vacuum to either let out blood from below the skin surface or just plain suction without bloodletting. The objective of this comprehensive review paper is to address the claims of Unani physicians and clinical studies conducted on the efficacy of Hijama. Various published clinical trials showed the efficacy of Hijama in the management of a number of diseases. Though, the effect showed by some clinical trials was short term. Hence, it is suggested that rigorous, well-designed, controlled, randomized and long duration follow up clinical trials on large sample size are to be conducted by trained clinicians or researchers to establish the efficacy of Hijama in the management of various diseases.

Keywords: Ilaj bi’t tadbeer, Hijama, Therapeutic Benefits

Introduction:

Al Hijama is an Arabic word which means application of cups and the literary meaning of Hijama is sucking.1,2,3,4 It is a technique carried out by application of cup shaped glass vessel on the body surface, creating vacuum by heat or by special suction apparatus in order to evacuate the morbid materials, to divert the material from the diseased part and to encourage the blood flow to the affected site.1,5,6 Râzî stated that cupping is a process of releasing the blood (toxic) from superficial small vessels located in muscles.7 Hijama can be defined as a minor surgical excretory procedure that creates superficial skin scarification to open skin barrier and creates a pressure gradient and a traction force across the skin and underlying capillaries to drain interstitial fluids and enhances blood clearance and waste excretion through skin.8

Classifications of Hijama in Unani Medicine:

On the basis of scarification Hijâ ma has been classified into two main types:

1. Hijama bish-Shart (wet cupping /cupping with scarification)
2. Hijama bilâ-Shart (dry cupping /cupping without scarification)9,10,11,12,13,14,15

Apart from these two types, Abul-qâsim al-Zahrâwî has mentioned a third type of Hijama in his book as follows16.

3. Hijama-i-Âabi (Hydro cupping)

Hijama bilâ Shart is further divided into two types:

a) Hijama-Nârîyah/ba-âtish (cupping with fire)
b) Hijama-Gharr-Nârîyah/be-âtish (cupping without fire)

Further Hijama is of two kinds on the basis of condition and situations

1. Hijama Iddîrârî (Mandatory)
2. Hijama Ikhtiyaârî (Optional)9,17

On the basis of movement of cups, Hijama bilâ-Shart is...
Mechanism of Action in Unani Medicine:

Unani system of medicine which elaborates that cupping therapy works on the basis of two following fundamentals.

1. Tanqiyā-i-Mawād (Evacuation of morbid matter)
2. Imālā-i-Mawād (Diversion of morbid matter)

In case of Ḥijāma bila Shart (Dry cupping) which works on the principle of Imālā-i-Mawād causes the diversion of morbid matter from one site to another.

In case of Ḥijāma bish Shart which works on the principle of Tanqiyā-i-Mawād evacuates the morbid matter from the affected site. Ḥijāma bish Shart has been observed that when the humours become thick in affected joint, Ḥijāma becomes very useful. It opens the pores of the skin, enhances the blood circulation, nourish the affected area with fresh blood and improves the eliminative function which allows the Akhlāt-i-fāsida to be evacuated from the body. It helps to draw out and eliminate the imbalanced qualities i.e. Ḥār (heat), Bārid (cold), Ṭaṭāb (moistness), Yābis (dryness).

Mechanism of Action of In Modern Medicine:

Exact mechanism of Ḥijāma bish Shart is still unknown but many researchers tried to explain the mechanism of action of Ḥijāma bish Shart through some theories like Pain gate theory, Prostaglandin theory, Endorphins and Encephalin production theory, Nitric oxide theory and Taiabah theory etc.

The short description of each of these theories is given as under:

Pain gate theory: This theory states that there is a gate or channel to transfer pain signals from its actual site of origin to the brain. When suction cup is applied, it produces pain which interfere with the actual pain which can’t be transmitted in the same gate or channel and in this way, elimination of pain occurs.

Prostaglandin theory: Prostaglandins are produced as a result of inflammation in our body and these prostaglandins transmit pain signals to the brain. By doing Ḥijāma bish Shart, we take these products out from the body and this results in reduction of pain.

Endorphins and encephalin production theory: These are natural components released in our body and these components are called ‘endogenous please substances’ which reduce the pain and enhance the mode.

Nitric Oxide theory: Nitric oxide is very important substance released in the body as a result of any trauma, and it is released also during or after Ḥijāma bish Shart. The functions of nitric oxide are:

1. Vasodilatation- this allows more blood flow to the area
2. Two-way vasodilatation effects
3. Muscle relaxation which cures spasms
4. Anti-thrombotic- protects the vessels from thrombosis
5. Anti-inflammatory and prevents stenosis of blood vessels

Taiabah Theory: This theory is currently the most accurate scientific explanation of Ḥijāma’s curative properties. It explains that Ḥijāma bish Shart is a minor surgical excretory procedure and its effect is similar to the mechanism of excretory function via glomerular filtration of the kidney as well as abscess drainage, by which pathological substances are removed from the body.

After reviewing many theories and discussion, it was concluded that wet cupping is dominated by control in (I) Neural, (II) Haematological, & (III) Immune system functioning.

In the neural system, effect occurs by regulation of neurotransmitters and hormones like serotonin, dopamine, endorphin, acetylcholine etc.

In the haematological system, main effects occur by these two pathways:

1. Regulation of coagulation and anti-coagulation systems like decrease in the level of haematological element such as fibrinogen
2. Decrease in the hematocrit followed by increase in the blood flow and in the end organ oxygenation.

In the immune system, main effects occur by these three pathways:

1. Irritation of the immune system by producing local simulated inflammation followed by activation of complementary system and increase level of immune products such as interferon and tumour necrotizing factors.
2. Organize of traffic of lymph and increase in the flow of lymph in the lymph vessels.
3. Effect on thymus.

Effect of Cupping therapy on Musculoskeletal system:

Farhadi K et al. conducted a randomized trial to evaluate the efficacy of wet cupping therapy for nonspecific low back pain and concluded that wet cupping care was significantly more effective in reducing bodily pain than usual care at 3-month follow-up. Al Bedah A et al., through his study concluded that wet cupping is potentially effective in reducing pain and improving disability associated with persistent nonspecific low back pain at least for 2 weeks after the end of wet cupping period. Kim JI et al. conducted a randomized, waiting-list controlled, open-label, parallel-group pilot trial to evaluate the efficacy of wet cupping for persistent nonspecific low back pain and reported a significant improvement in pain in favor of wet cupping.

Similarly, Mardani-Kivi M et al. conducted a randomized clinical trial to evaluate the efficacy of wet cupping for persistent nonspecific low back pain and reported significant improvement in pain without any conventional treatment. Lauche R et al. conducted a randomized controlled pilot study to evaluate the efficacy of a series of five dry cupping treatments on pain and mechanical thresholds in patients with chronic nonspecific neck pain and 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. Cramer H et al. studied to determine the efficacy of pulsating cupping for treating chronic neck pain. It was a randomized controlled clinical trial with two parallel groups. The authors concluded that Pneumatic pulsation cupping therapy appears to be a safe and effective method to relieve pain and to improve function and quality of life in patients with chronic neck pain.

Saha FJ et al. conducted a randomized controlled trial to evaluate the efficacy of cupping massage in patients with chronic neck pain and concluded that cupping massage appears to be effective in reducing pain and increasing...
Kouser et al. conducted a study to evaluate the effect of traditional wet cupping on shoulder and neck pain and the authors reported significant improvement in shoulder and neck pain. Kim TH et al. concluded that two weeks of cupping therapy and an exercise intervention is effective in reducing pain and improving neck function in video display terminal workers. Lauche R et al. through his study concluded that significant increases were found for physical function and quality of life in patients with chronic nonspecific neck pain suggesting that cupping treatment might have sustainable effects for up to 2 years. Similarly, Wen M X et al. through his study concluded that wet cupping therapy provides a rapid therapeutic effect in nerve-root type cervical spondylosis, thus exhibiting significant analgesic effects. Khan AA et al. conducted a randomized controlled clinical trial to evaluate the efficacy of dry cupping for osteoarthritis of the knee. The authors reported a significant improvement in pain in favor of dry cupping. Abdulla KS et al. through his study concluded that cupping therapy is an effective treatment for reducing the level of inflammatory markers such as C-reactive protein (CRP) and rheumatoid factor (RF). Bilal M et al. studied to determine the effect of wet cupping for treating sciatica pain. The authors reported a highly statistically significant effect of wet cupping in the treatment of sciatica pain and improvement in activities of daily living. Similarly, Shaikh N et al. through his study concluded that there is significant reduction in severity of symptoms and signs of sciatica after completion of the study. Michalsen A et al. conducted a randomized controlled trial to evaluate the effects of traditional cupping therapy in patients with carpal tunnel syndrome. The authors concluded that a single course of wet cupping upon the shoulder triangle overlying the trapezius muscle appears to be effective in relieving symptoms and pain for at least 1 week. Similarly, Mohammadi S et al. through his study concluded that cupping therapy in a routine physical therapy program can reduce the severity of symptoms and improve the distal sensory disturbance of the median nerve. Abuzar et al. concluded through a randomized controlled clinical trial that dry cupping is effective in the management of non-specific low back pain. A comparative study between the effects of dry cupping and soft and prolonged massage in the management of knee osteoarthritis was conducted by Islam MU et al. In this randomized controlled clinical trial, it was concluded that dry cupping is significantly effective in the management of knee osteoarthritis.

Effect of Cupping therapy on Reproductive system:

Sultana A et al. studied to determine the efficacy of dry cupping for treating dysmenorrhea. The authors concluded that dry cupping is significant in reducing pain intensity in dysmenorrhea. Dadmehr M et al. studied a case report to evaluate the efficacy of dry cupping on menorrhagia and concluded that dry cupping therapy is effective in decreasing fibroid related symptoms like dysmenorrhea and excess bleeding and also the size of the fibroid. Sultana A et al. conducted a preliminary study to evaluate the efficacy of dry cupping on menorrhagia and concluded that dry cupping therapy is effective and safe in decreasing fibroid related symptoms in young women. Abduljabbar H et al. conducted a pilot study to evaluate the efficacy of wet cupping for treating female infertility. The authors claimed that wet cupping is beneficial in infertile women for attaining pregnancy. Azizkhan M et al. conducted a randomized controlled trial to evaluate the efficacy of dry cupping therapy in the treatment of idiopathic menorrhagia and concluded that dry cupping is an effective treatment in reducing the intensity of bleeding during the menstrual period compared to medroxyprogesterone acetate. Khan AA et al. conducted a case report to evaluate the efficacy of wet cupping in the treatment of polycystic ovarian syndrome. The authors claimed that wet cupping regulates menstrual cycle without fluctuating hormonal levels. Mokaberinejad R et al. through his study concluded that Fennel seed infusion plus dry cupping therapy is effective and safe in reducing the days between two menstrual periods and manages oligomenorrhea.

Effect of Cupping therapy on Nervous system:

Ersoy S et al. conducted a randomized controlled trial to evaluate the efficacy of wet cupping therapy in migraine headache. The authors claimed that wet cupping therapy reduces pain and disability in migraine patients and that effectiveness increases as application continues. Similarly, Seo J et al. through his study concluded that cupping has potential therapeutic effects on treating migraine. Ali M et al. concluded that dry cupping along with Unani pharmacopeial formulation is effective in the management of hemiplegic stroke disabilities.

Effect of Cupping therapy on Circulatory system:

Aleyeidi NA et al. conducted a randomized controlled trial to evaluate the efficacy of wet cupping in hypertensive patients. The authors concluded that wet cupping therapy is effective in reducing systolic blood pressure in hypertensive patients for up to 4 weeks. Husain NR et al. conducted a single arm intervention study to evaluate the effect of wet cupping therapy on fasting blood sugar, renal function parameters, and endothelial function. The authors claimed that repeated wet cupping therapy improves the body’s health which can lead to improvements in renal function and the prevention of metabolic diseases. Nisari M et al. conducted a randomized controlled trial to evaluate the effect of wet cupping therapy on serum lipid concentrations of among healthy young men. The authors recommended that wet cupping therapy may be an effective therapy for reduction of LDL cholesterol concentrations and consequently may have a protective effect against atherosclerosis. Faidi et al. conducted a randomized controlled trial to evaluate the effect of wet cupping against increased arterial baroreflex sensitivity in hypertensive patients. The authors concluded that wet cupping therapy effectively increases the sensitivity of arterial baroreflex with an indicator of decreased blood pressure in the elderly with hypertension up to a limit of 4 weeks after therapy.

Conclusion:

Ḥijāma is one of the procedures of Ḥijāmah (Regimenal therapy) described in Unani system of medicine which includes evacuation of morbid matter from the body using cup shaped vessels. From the above discussion it can be concluded that Ḥijāmah plays an important role in maintaining normal health; it is beneficial in both preventive and curative regimen. Ḥijāmah is used effectively for the management of musculoskeletal, reproductive, circulatory and nervous disorders. Hence, we suggest rigorous, controlled, randomized and long-duration follow-up studies on large sample size, to be conducted by trained dinicians or researchers to establish the efficacy Ḥijāmah in the management of various diseases.
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