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## Short Communication

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### THERAPEUTIC APPLICATION OF AL HIJAMAH (CUPPING THERAPY) IN OSTEOARTHRITIS OF THE KNEE

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#### ABSTRACT

**Background:** Al Hijamah (Cupping Therapy) is an integral part of regimetal therapy used in Unani System of Medicine. It has been successfully practiced by Greeco-Arabic physicians in the management of musculoskeletal and neurological disorders since antiquity. Osteoarthritis is the commonest form of arthritis and is a major cause of pain and disability in the elderly. The incidence of arthritis has increased considerably in present scenario.

**Objective:** The present study was aimed to evaluate the efficacy and safety of Al Hijamah in the patients of knee Osteoarthritis on scientific parameters.

**Methodology:** The study was conducted in the Regimetal Therapy Unit of 50 Beded Govt. Unani Hospital Srinagar J&K India. 75 patients of OA were enrolled in the trial after obtaining their informed consents. All the patients were clinically assessed and diagnosed on the basis of thorough history, clinical and radiological examination of the affected joint. Then Al Hijamah (Dry Cupping) was applied on the affected joint for a period of approximately 15-20 minutes as per the standard schedule over four weeks. The efficacy of Al Hijamah was assessed on the basis of Western Ontario and McMaster University (WOMAC) Score and Visual Analogue Scale (VAS) Score.

**Results:** The results were analyzed statistically by using a Paired Student's t-test. There was a significant reduction in the WOMAC and VAS scores of post-treatment group (P <0.01) as compared to pre-treatment group.

**Conclusion:** It is concluded in this observational non comparison study that Al Hijamah may be used safely and effectively in the management of Osteoarthritis.

**Keywords:** Al Hijamah, Cupping Therapy, Osteoarthritis, Unani medicine.

#### INTRODUCTION

Al Hijamah is an Arabic word which means application of cups and the literary meaning of Hijamah is sucking. It is a technique carried out by application of cup shaped glass vessels (2.54-7.26 cm in diameter) 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. <sup>1, 2</sup> Al Hijamah is an incredibly ancient and universal practice that spans both East and West. In the East, the Chinese have been practicing the art of cupping for at least 3,000 yrs. In the west, Egyptian

had given birth to the cupping therapy. In ancient Greece, Hippocrates was strong advocate of cupping in joint and skin disorders. It has been extensively practiced by Greeco-Arabic physicians in the management of musculoskeletal and neurological disorders.<sup>3,4</sup>

Osteoarthritis (OA) is a major health problem in terms of its prevalence, associated disability and effect on the quality of life. It is the commonest form of arthritis worldwide and the leading cause of mobility related disability in the elderly. Patients usually complain of joint pain, stiffness and swelling which are worse in the morning. <sup>5</sup> According to the World Health Organization, OA is the second most common

musculoskeletal condition (30%) after back pain (50%).The reported prevalence of OA from a study in rural India is 5.78%. In India, OA of knee joint is more common, more prevalent and more commonly associated with symptoms in women than OA of hip joint.<sup>6</sup> There is no cure for OA. Symptomatic relief is obtained with analgesics and non steroidal anti-inflammatory drugs but the prolonged use of these drugs produce significant side effects.<sup>7</sup> Therefore, patients with OA constantly seek long-term control of symptoms through non pharmacological measures such as cupping, leeching, thermal modalities, exercise, massage, acupuncture etc. Keeping the historically safe and effective therapeutic application of Al Hijamah in joint disorders and to rationalize the concept on standardized outcome measures, the study was designed to observe the efficacy and safety of Al Hijamah in knee OA.

#### **METHODOLOGY**

The study was conducted in the Regimenal Therapy Unit, of 50 Bedded Govt. Unani Hospital Srinagar Jammu & Kashmir India, The study was an observational trial which extended from March 2013 to July 2014. A total of 75 patients with knee OA, who were eligible based on the inclusion criteria, were enrolled after obtaining their informed consents. All the patients were clinically assessed and diagnosed on the basis of thorough history, clinical and radiological examination of the affected joint.

##### **Inclusion criteria**

Clinically and radiologically diagnosed patients of knee OA

Patients of either sex

Patients in the age group of 35–75 years

##### **Exclusion criteria**

Patients below 35 and above 75years

Patients with any systemic illness (hepatic failure, renal failure, ischemic heart disease and diabetes mellitus)

Patient suffering from other concomitant diseases such as rheumatoid arthritis, tubercular arthritis, infective arthritis, gout, syphilitic arthritis, traumatic arthritis, gonorrhoeal arthritis

Pregnant and lactating mothers

Person with serious psychiatric illness or mental impairment

#### **Subjective parameters**

Pain in joints

Tenderness on the joint area

Morning stiffness

Swelling over the affected joint

Restriction of movement

#### **Objective parameters**

Radiological evidences (X-ray knee joint, AP and Lat. view)

Western Ontario and McMaster University (WOMAC) Scale

Visual Analogue Scale (VAS) score

#### **Procedure of Trial**

Prior to the procedure, the following investigations were done to rule out the exclusion criteria. Full patient history, Random blood sugar (RBS), hemogram (Hb%), total leukocyte count (TLC), differential leukocyte count (DLC), erythrocyte sedimentation rate (ESR), serum uric acid, c-reactive protein (CRP), rheumatoid arthritis (RA) factor, Liver Function Tests (LFTs), Renal Function Tests (RFTs), Electrocardiography (ECG), X-ray knee joint and hepatitis B surface antigen (Hbs Ag).

A standard cupping therapy equipment was procured and utilized including a hand suction pump and plastic cups set. The whole area of knee joint was thoroughly cleaned with distilled water. Al Hijamah (Dry Cupping ) was applied on the affected joint as per the standard schedule. Four cups were applied on the knee on each side for a period of approximately 15-20 minutes. Then cups were removed by pressing the skin around the edges of the cup. The duration of therapy was one month. The schedule of therapy was seven days viz; 1st , 3rd, 5th, 7th 15th, 22st and 29th days. The assessment of subjective and objective parameters was done fortnightly (1day, 15th day and 30th day) using WOMAC OA Scale and VAS Score where decrease in scores suggests improvement.<sup>8</sup> The severity of various clinical parameters was graded on 4 points as (0= nil, 1= mild, 2= moderate and 3= severe). The pre-and post-treatment data (scores) were tabulated and statistically analyzed by applying paired Student's t-test to finally assess the efficacy of cupping therapy.

**Table 1: Demographic and Baseline Characteristics of patients**

Contents	No. of patients	Percentage (%)
<b>Age (years)</b>		
35–45	3	5%
46–55	15	25%
56–65	36	60%
66–75	6	10%
<b>Gender</b>		
Male	22	36.6%
Female	38	63.3%
<b>Affected joint</b>		
Right knee	10	16.67%
Left knee	14	23.33%
Both	36	60%
<b>Symptoms</b>		
Pain	60	100%
Tenderness	36	60%
Stiffness	44	73.3%
Restricted movements	40	66.6%
Swelling	48	80%

**Table 2: Effect of Cupping therapy on WOMAC and VAS scores**

<b>WOMAC score</b>		
Symptom	Before treatment	After treatment
Pain	16.12	6.40
Stiffness	10.50	2.70
Daily activity	36.4	12.00
<b>VAS score</b>		
Pain	6	2
Stiffness	4	0
Tenderness	3	0
Swelling	2	0
Restricted movements	3	0

## RESULTS

Out of 75 patients enrolled, 15 were lost to follow-up and were excluded from the study, leaving behind 60 patients who completed the study. Out of 60 patients 38 (63.33%) were females and 22 (36.67%) patients were males. The Mean  $\pm$  SD of age was 54 years. The highest incidence (60%) was observed in the age group of 56-65 years while the least incidence (5%) was seen in the age group of 35-45 years. 36 (60%) patients had bilateral OA, while 10 (16.67%) patients complained of right-sided and 14 (23.335%) patients complained of left-sided OA. Regarding clinical features, only 36 (60%) patients complained of tenderness, 40 (66.6%) had restricted movements, 44 (73.3%) had stiffness, 48 (80%) had swelling and all 60 (100%) patients complained of pain [Table 1].

### Effect of Cupping therapy on WOMAC score

WOMAC Scale is an internationally accepted scale which consists of questions based on three symptoms viz., pain, stiffness and difficulty in performing physical activities. WOMAC scores were compared and statistically analyzed by applying paired Student's t-test in all patients before and after treatment. The mean WOMAC scores of post-treatment groups were found to be significantly lowered ( $P < 0.001$ ) when compared with mean WOMAC scores of pre-treatment group. [Table 2].

### Effect of Cupping therapy on VAS score

VAS scores were compared and statistically analyzed in all the patients before and after treatment. The mean VAS scores of post-treatment groups were found to be significantly lowered ( $P < 0.001$ ) when compared with mean VAS scores of pre-treatment group. [Table 2].

## DISCUSSION

Al Hijamah is a type of regimenal therapy used to relieve pain and swelling in OA. In present study, Al Hijamah (Dry Cupping) produced significant improvement on various symptoms and signs including pain, tenderness, stiffness, swelling, WOMAC and VAS Scores. But there was no effect on the degenerative changes of joints as observed in the X-rays of pre and post-treatment groups. Besides, the therapy was found to be safe and well tolerated as no adverse effects were noticed during and after the treatment and overall compliance to the therapy was good. In ancient terms, the effectiveness of cupping therapy in OA might be

due to diversion and elimination of morbid humors present locally around the joints by the therapy. This is in consonance with the description of cupping therapy proposed by Razi, (Rhazes), Jurjani and Ibne Sina (Avicenna). [9-11] Cupping is an ancient method of causing local congestion to treat various diseases especially neuro-muscular and joint disorders. A partial vacuum is created in cups placed on the skin either by heat or suction. which draws up the underlying tissue. The skin and underlying tissue swells and becomes warm, and gets sucked into the cup. This produces blood congestion at the site and stimulates circulation. Cupping is a form of derivation therapy, which means drawing away the vital energy or substances from the site of blockage or obstruction. Cupping acts by improving the circulation of blood, and other vital fluids such as lymphatic fluids and by breaking up and dispersing blockages and congestion of offending waste matter, toxins and morbid humors. Cupping locally stimulates the sensory nerves of the skin improves the eliminative functions of wastes from the body which may cause disease.<sup>12,13</sup>

## CONCLUSION

It may be concluded that the cupping therapy is an effective and safe regimen in the symptomatic management of management of knee OA. Thus further studies of long duration and long follow-up period with randomized standard controlled designs on large population need to be carried out for further exploration of efficacy and safety of cupping therapy.

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