



## CLINICAL EFFICACY OF HABB-E-SURANJAN IN OSTEOARTHRITIS (WAJA-UR-RIKBAH)

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### ABSTRACT

Osteoarthritis (OA), also often called 'osteoarthrosis or 'degenerative joint disease,' is the most common form of arthritis. Prevalence of OA in India is reported to be in the range of 17-60.6%. Knee osteoarthritis (OA) is a common condition which represents a major contribution to the burden of physical disability. Prevalence increases with age, so that about 11% of all women over the age of 60 years have symptoms due to knee OA. *Habb-e-Suranjan* is a Unani poly herbal compound formulation mentioned in a Unani pharmacopeia, Qarabadeen-e-Majeedi. In which it is recommended for waja-ul-mafasil (arthralgia). This formulation contains three ingredients, *Chob Zard* (*Curcuma longa* Linn.), *Surinjan Talkh* (*Colchium luteum* Baker.) and *Samaghe Arabi* (*Acacia Arabica* Willd.). Aim of this study was to comprehend the effectiveness of the drug *Habb-e-Suranjan* in knee osteoarthritis patients. This study was done in 25 patients. *Habb-e-Suranjan* was administered orally as 2 pills 2 times a day with water or milk for one month. The outcome measures such as VAS (Visual Analogue Scale), KOOS (Knee injury and Osteoarthritis Outcome Score) and 10 meters walking test were used to assess the symptoms before and after treatment. These paired data were analyzed statistically according to Wilcoxon Matched paired signed rank test. KOOS mean pain score was  $50.4 \pm 4.39$  before treatment and it was  $68.13 \pm 2.21$  after treatment with an extremely significant improvement. Similarly there was a significant ( $42.14^{**} \pm 4.45$ ) improvement at 4th week in KOOS symptoms score.

**KEYWORDS:** Osteoarthritis, joint, Waja-ul-Mafasil.

### INTRODUCTION

Osteoarthritis is the commonest joint disease affecting the human being and an important cause of disability.<sup>[1]</sup> It is manifest by pain in or around the involved joint that prompts the diagnosis of osteoarthritis, initially often involving only one joint, with others becoming painful subsequently.<sup>[2]</sup> The pain of osteoarthritis usually starts insidiously as intermittent localized, described as deep ache often aggravated by joint use and relieved by rest in an asymmetric fashion; then pain becomes persistent and in advanced cases night pain may be very disturbing, accompanied frequently by joint stiffness lasting for 5-30 minutes that follows periods of inactivity on first awakening in the morning and after sitting.<sup>[2,3]</sup> Besides pain in joints, other salient features of osteoarthritis are bony swelling, crepitus, restricted movement, deformity of joint, muscle weakness and muscle wasting.<sup>[2]</sup> Commonly involved joints in Osteoarthritis are the knee, the hand joint, spinal apophyseal joints. The hip, carpal joints, elbow, ankle and shoulder joints are rarely involved.<sup>[2,4]</sup> Primary Knee Osteoarthritis is the commonest form of Osteoarthritis.<sup>[2]</sup> It is usually

unilateral in the beginning but becomes bilateral over a period of time.<sup>[2]</sup> Obesity, female gender and knee bending are the important risk factors.<sup>[2,3]</sup> It may involve predominantly medial compartment of femorotibial joint space resulting in varus deformity. Lateral compartment disease may lead to valgus deformity.<sup>[3,5]</sup> NSAIDs are the most commonly prescribed agents in modern system of medicine for the treatment of osteoarthritis. Their use is limited by their gastric and renal toxicity. Elderly people are particularly prone to develop the NSAID complications.<sup>[2,5]</sup>

As far the Unani system of medicine is concerned, Primary knee osteoarthritis is recognised with the term "Waja-ul-Mafasil" which is a painful condition that can affect any joint of the body.<sup>[10]</sup> It may be associated with inflammatory picture in case of Sue Mizaj Maddi and without cardinal signs of inflammation, in case of Sue Mizaj Sada.<sup>[6,7,8]</sup> Eminent Unani physicians have been treating Waja-ul-Mafasil (Primary Knee Osteoarthritis) since ancient time and have left behind a long list of medicines both for oral and local use in form of Hub

(*Habb-e-Suranjan*, Habb-e-Gul-e-Aakh), Qurs (Qurs-e-Mafasil), Majoon (Majoon Suranjan, Majoon Chob Chini, Majoon Ushba) Roghan (Roghan Surkh, Roghan Haft Burg, Roghan Baboona), Zimad (Zimad Rahat, Zimad Nana) etc.<sup>19,101</sup> *Habb-e-Suranjan* is a Unani poly herbal formulation. This formulation contains six ingredients i.e. as mentioned in Qarabadeen-e-Majeedi, which is recognized by Indian government as a Unani pharmacopeia.

Suranjan – Colchicum Luteum corms	28 grams
Elwa – Aloe Barbadosis gel	31 grams
Anethum Sowa Fruits	31 grams
Guggul – Commiphora Mukul Gum	13 grams
Mastagi – Pistacia Lentiscus resin	13 grams
Ipomoea Turpethum Stem (Jalap)	81 grams

## METHODOLOGY

This series of case studies was carried out in RRIUM, Srinagar, Kashmir University, in accordance with the principles stated in the Declaration of Helsinki (2004). 40 patients were participated in this study. Patients were recruited at Unani medical OPDs. The herbal formulation, *Habb-e-Suranjan* is a product IMPCL, Uttrakhand (GMP certified) and this is dispensed free of

cost by Unani pharmacy, RRIUM, Srinagar. *Habb-e-Suranjan* was administered orally as 2 pills 2 times a day with water or milk for one month. The following outcome measures were used to assess the efficacy of the treatment at 4th week. Visual Analogue Scale (VAS) is a measurement instrument in which it is possible to measure a characteristic or attitude that is believed to range across a continuum of values and cannot easily or directly measured. It is a horizontal line, which is 100 mm in length. The two extremes of the scales are marked as 0 and 100 respectively. Zero represents no pain whereas 100 represent extreme pain (on which higher score indicates more pain). The subjects were given the scale and asked them to mark on the line, the point they feel represents their perception of their current state of pain<sup>18</sup>. Knee injury and Osteoarthritis Outcome Score (KOOS) is developed as an instrument to assess the patients' opinion about their knee and associated problems. KOOS is meant to be used over short and long time intervals; to assess changes from week to week induced by treatment (medication, operation, physical therapy) or over years due to the primary injury or posttraumatic OA. KOOS consists of 5 subscales; pain, other symptoms, function in daily living (ADL), function in sport.

## RESULTS

**Table 1: Distribution of patients according to age and sex.**

Age	Male	Female	Total	Statistics (Mean ± S.D)
35-45	04	06	10	(38.14 ± 13.95) years in Male Maximum age 60 years Minimum age 18 years (38.22 ± 10.90) years in Female
46-55	03	10	13	
56-65	03	04	07	
66-75	05	04	09	
76-85	0	01	01	
<b>Sub Total</b>	15	25	40	

**Inference:-** Out of total 40, cases maximum were in the age group of 46-55 years. This situation is common in both genders.

**Table 2: Classification according to Socio economic condition.**

Social Status	Male	Female	Total
Lower income group	05	10	15
Middle income group	10	10	20
Higher income group	0	05	5
<b>Total</b>	<b>15</b>	<b>25</b>	<b>40</b>

**Inference:-** Out of total 40 cases, 15 cases were in lower income group, 20 cases were in middle income group and 5 cases were in higher income group. It has been seen from the study that osteoarthritis is most common middle income population

**Table 3: Distribution of Patients according to the clinical features.**

S. N.	Sign & Symptoms	Numbers
1.	Joint tenderness	100
2.	Swelling	100
3.	Morning stiffness	50
4.	Movement restriction	29
5.	Joints pain	100

**Inference:-** It has been seen that joint pain and tenderness and swelling were present in all the patients. Morning stiffness was present in 50 patients and movement restriction was present in 29 patients.

**Table 4: Classification according to chronicity.**

	0-5 years	6-10years	11-15years	16 & above	Total
<b>Male</b>	05	03	04	0	12
<b>Female</b>	10	02	06	0	18
<b>Total</b>	15	05	10	0	40

(Mean  $\pm$  S.D.)

(4.24  $\pm$  5.02) years in Male and (5.83  $\pm$  5.96) years in Female

Range Minimum 3 months and maximum 20 years in male

Range Minimum 1 month and maximum 25 years in Female

**Table 5: KOOS Subscales Values before Treatment and after Treatment.**

	Pain	Symptoms	ADL	Sports/Rec
<b>BT</b>	50.4 $\pm$ 4.39	32.44 $\pm$ 6.122	45.64 $\pm$ 3.341	24.63 $\pm$ 2.295
<b>AT</b>	68.13 $\pm$ 2.21	42.14** $\pm$ 4.45	64.02 $\pm$ 2.30	40.23 $\pm$ 2.58
<b>Improvement</b>	17.7 %	9.7%	18.4%	16.5%

**BT:** Before Treatment, **AT:** After Treatment.

## DISCUSSION

In present study, a maximum patient lies in the age group of 46-55 years followed by 35-45 years. And 25 cases are female and 15 cases are male. As per socioeconomic status maximum cases are present in middle socioeconomic status. According to sign and symptoms joint pain and tenderness and swelling were present in all the patients. Morning stiffness was present in 50 patients and movement restriction was present in 29 patients.

In our study before treatment, KOOS mean pain score was 50.4  $\pm$  4.39 and it was improved by 17.7 % after treatment at 4th week; the mean pain score was 68.13 $\pm$ 2.21 which showed an extremely significant improvement ( $P < 0.001$ ). Before commencing the treatment, KOOS symptoms score was 32.44  $\pm$  6.122, later it was improved by 9.7% at 4th week, and mean score was 42.14\*\* $\pm$ 4.45 with an extremely significant statistical difference. KOOS function in daily living (ADL) was 45.64 $\pm$ 3.341 before treatment and it became 18.4% of improvement at 4th week. KOOS Function in sport and recreation (Sport/Rec) was 24.63 $\pm$ 2.295 at the beginning and it was improved by 16.5% at 4th week 40.23 $\pm$  2.58 with extremely significant statistical difference ( $P < 0.001$ ).

Osteoarthritis is a chronic, degenerative and progressive disease that results from complex interactions of multiple physical and biochemical factors<sup>11</sup>. It gives huge burden by the way of financial and social impact on the patients. It affects the country's economy as the victims of this disorder are usually working age group<sup>12</sup>. The treatment objectives are to hold-up the degenerative process and to minimize symptoms, so that the patients of OA can move freely to perform their day to day activities by themselves; in addition to that, the therapy should be tolerable when used for a longer period without any adverse effects or with minimal side effects. As per the Unani doctrine, derangement of the humours occurs due to the presence of morbid matters in the body and the blood circulation, which are responsible for the

production of many diseases. Osteoarthritis is caused by derangement of humours, which are cold in nature like Balghami (phlegm), and Saudavi (black bile) humours, known as cold derangement of temperament. In this context, Habb-e-Suranjan has several advantages as the ingredients of the drug (especially *C. luteum* and *C. longa*) contains anti-inflammatory properties, anesthetic properties,<sup>[13]</sup> moreover they have the properties of eliminating bad matters which are accumulated in the joints by maturing the matters and eliminating by the way of laxative actions<sup>14</sup>. Further this Habb-e-Suranjan has the muqawwiyat e mafasil (strengthening the joints) actions too. The patients who were treated with this Habb-e-Suranjan had decreased perception in pain and other symptoms of osteoarthritis. Moreover, they experienced improved functional ability and day to day performance.

## CONCLUSION

In this study, the Unani treatment module was found to be effective in reducing the severity of disease in patients with osteoarthritis of knees.

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