Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 4s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

Effectiveness of Habbe Gule Aakh in Osteoarthritis Knee: A Randomized Clinical Trial

Professor Mubasheera Begum[*1] Professor V. Habibullah[2]

[*1]Assocoiate Professor, Department of Moalajat, Government Unani Medical College, Chennai, Tamil Nadu, India

[2]HOD, Department of Ilmul Advia, Government Unani Medical College, Chennai, Tamil Nadu, India

[*]**Corresponding author**

MSc Department of Moalajat,

Government Unani Medical College Chennai, Tamil Nadu, India

Email ID: mubasheera.begum@gumc.in

Cite this paper as: Professor Mubasheera Begum, Professor V. Habibullah, (2025) Effectiveness of Habbe Gule Aakh in Osteoarthritis Knee: A Randomized Clinical Trial. *Journal of Neonatal Surgery*, 14 (4s), 907-.

ABSTRACT

Background: Osteoarthritis (OA) of the knee is a degenerative disorder leading to joint pain and functional limitations. Traditional Unani medicine has employed herbal remedies, such as Habbe Gule Aakh (HGA), to manage musculoskeletal conditions. However, empirical evidence supporting its efficacy is limited.

Objective: This study aimed to evaluate the effectiveness of HGA in different doses for osteoarthritis management using clinical and radiological parameters.

Methods: A randomized, single-blind, parallel-arm comparative study was conducted at the National Institute of Unani Medicine, Bengaluru. Sixty participants diagnosed with knee OA were categorized into four groups based on Kellgren-Lawrence grading. Group I received 500 mg/day, Group II 1000 mg/day, Group III 1500 mg/day, and Group IV 2000 mg/day of HGA. The assessment was conducted at baseline, and on the 7th, 14th, and 21st days using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and Visual Analogue Scale (VAS). Statistical analysis included ANOVA and paired t-tests.

Results: Significant improvement ($p<0.001$) was observed in all groups, with higher doses showing greater efficacy in reducing pain and improving joint function. No adverse effects were reported.

Conclusions: HGA demonstrated promising results in knee OA management. Further large-scale studies with extended follow-ups are warranted.

Keywords: *Osteoarthritis, Knee Pain, Unani Medicine, Habbe Gule Aakh, Kellgren-Lawrence Scale, WOMAC, VAS, Herbal Medicine, Randomized Clinical Trial*

1. INTRODUCTION

Osteoarthritis (OA) is the most prevalent joint disorder, affecting millions worldwide. Conventional management includes NSAIDs and corticosteroid injections, which pose risks of adverse effects. Unani medicine offers alternative therapies, including HGA, composed of herbal ingredients like Calotropis procera and Zingiber officinale, known for their anti-inflammatory properties. This study explores the dose-dependent efficacy of HGA in OA knee management.

The pathophysiology of OA involves cartilage degradation, synovial inflammation, and subchondral bone remodeling, leading to pain and joint stiffness. Recent studies highlight the role of oxidative stress and inflammatory cytokines in OA progression [4]. Unani medicine emphasizes humoral imbalance as a contributing factor, addressing it through detoxification and herbal formulations [5].

Methods

Study Design and Participants A total of 60 OA patients were enrolled based on the American College of Rheumatology (ACR) diagnostic criteria and Kellgren-Lawrence radiological grading. The participants were randomized into four groups, each receiving varying doses of HGA for 21 days.

Outcome Measures WOMAC and VAS scores were recorded at baseline and subsequent follow-ups. Safety monitoring was conducted throughout the study. The intervention was designed to assess the efficacy of escalating doses of HGA in relieving OA symptoms.

Statistical Analysis Data were analyzed using ANOVA and paired t-tests to determine intra-group and inter-group significance. Statistical significance was set at $p<0.05$.

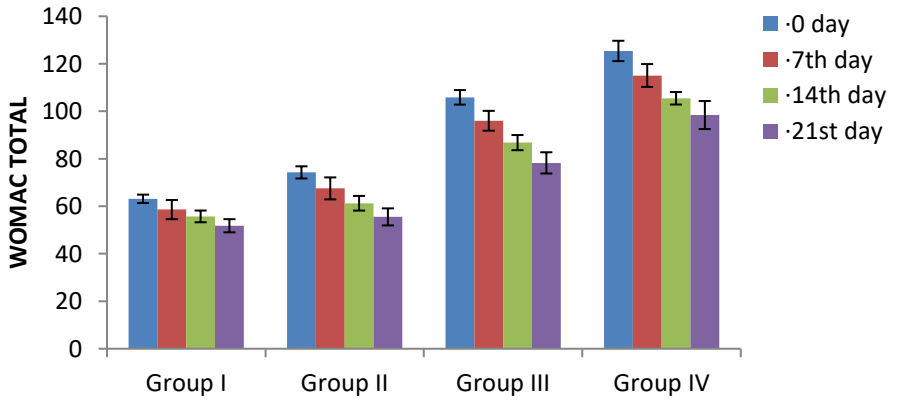
2. RESULTS

The study revealed a dose-dependent improvement in WOMAC and VAS scores across all groups. Higher doses of HGA resulted in greater pain reduction and functional improvement. No significant adverse events were reported. The findings support the role of Unani medicine in musculoskeletal disorders and emphasize the importance of personalized herbal treatment [6].

Table 1: WOMAC TOTAL- ASSESSMENT IN FOUR GROUPS OF PATIENTS STUDIED @ STUDY POINTS

WOMAC TOTAL	Group I	Group II	Group III	Group IV
0 day	63.13±1.77	74.27±4.03	105.87±2.47	125.40±2.77
7th day	58.60±2.56	67.53±4.63	96.00±3.09	115.07±3.59
14th day	55.73±3.06	61.27±4.18	86.80±3.19	105.47±4.47
21st day	51.80±4.28	55.53±4.81	78.27±2.63	98.40±5.91
DIFFERENCE FROM 0TH DAY				
7th day	4.533	6.733	9.867	10.333
14th day	7.400	13.000	19.067	19.933
21st day	11.333	18.733	27.600	27.000
P VALUE FROM 0TH DAY				
7th day	<0.001**	<0.001**	<0.001**	<0.001**
14th day	<0.001**	<0.001**	<0.001**	<0.001**
21st day	<0.001**	<0.001**	<0.001**	<0.001**

STUDENT T TEST (PAIRED)



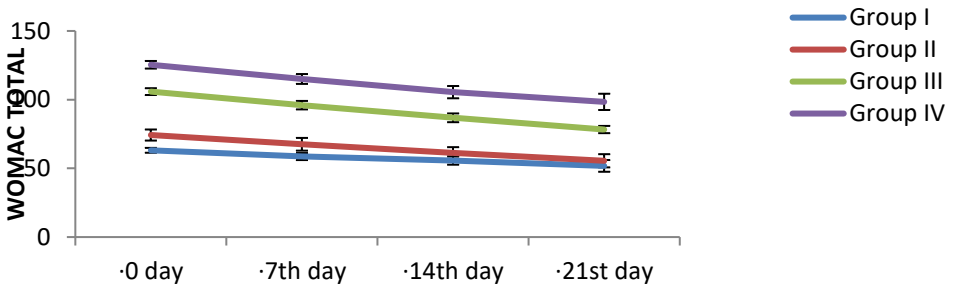


Table 2: VAS- ASSESSMENT IN FOUR GROUPS OF PATIENTS STUDIED @ STUDY POINTS

VAS	Group I	Group II	Group III	Group IV
RESULTS				
0 day	7.27±1.10	7.53±0.92	8.93±0.26	8.87±0.35
7th day	5.80±1.08	6.20±0.77	6.80±0.68	6.87±0.35
14th day	4.47±0.99	4.93±0.80	5.27±0.80	5.00±0.38
21st day	2.80±0.56	3.53±0.74	3.73±0.70	3.33±0.49
DIFFERENCE FROM 0TH DAY				
7th day	1.467	1.333	2.133	2.000
14th day	2.800	2.600	3.667	3.867
21st day	4.467	4.000	5.200	5.533
P VALUE FROM 0TH DAY				
7th day	<0.001**	<0.001**	<0.001**	<0.001**
14th day	<0.001**	<0.001**	<0.001**	<0.001**
21st day	<0.001**	<0.001**	<0.001**	<0.001**

STUDENT T TEST (PAIRED)

3. DISCUSSION

These findings indicate the potential of HGA as an effective herbal intervention for OA knee management. The study emphasizes the need for further trials to establish long-term benefits and comparative efficacy against conventional treatments. The anti-inflammatory and analgesic properties of HGA components suggest a multimodal therapeutic approach to OA management [7,8].

Future research should include long-term follow-ups and larger sample sizes to validate the findings. Additionally, comparative studies with NSAIDs and other conventional treatments could provide more insight into the clinical relevance of HGA in OA treatment [9].

4. ACKNOWLEDGMENTS

This study was supported by the National Institute of Unani Medicine, Bengaluru. The authors express gratitude to the research team and study participants.

Conflicts of Interest

The authors declare no conflicts of interest.

REFERENCES

[1] Kellgren JH, Lawrence JS. Radiological assessment of osteoarthrosis. Ann Rheum Dis. 1957;16(4):494-502.

[2] Altman RD, Gold GE. Atlas of individual radiographic features in osteoarthritis. Osteoarthritis Cartilage. 2007;15(Suppl A):A1-A56.

[3] Chopra A, Patil J, Billempelly V, et al. The prevalence of osteoarthritis in India. Indian J Rheumatol. 2018;13(1):27-35.

[4] Martel-Pelletier J, Barr AJ, Cicuttini FM, et al. Osteoarthritis: pathophysiology and implications for pharmacologic treatment. Ann Intern Med. 2016;165(7):526-534.

[5] Ibn Sina. Al-Qanoon fi al-Tibb. Jamia Hamdard Press; 2010.

[6] Razi M. Kitab al-Hawi. Central Council for Research in Unani Medicine; 2012.

[7] Henrotin Y, Lambert C, Richette P. Biological therapies for osteoarthritis: What is the future? J Clin Med. 2019;8(9):1231.

[8] Goldring MB, Goldring SR. Osteoarthritis. J Cell Physiol. 2016;231(12):2623-2630.

[9] Bannuru RR, Osani MC, Vaysbrot EE, et al. OARSI guidelines for the non-surgical management of knee osteoarthritis. Osteoarthritis Cartilage. 2019;27(11):1578-1589.

[10] Sharma L. Osteoarthritis of the knee. N Engl J Med. 2021;384(1):51-59.