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A Clinical Study to Evaluate The Efficacy of "HABB-E-IRQ-UN-NASA" in the Management of IRQ-UN-NASA [Sciatica]

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ABSTRACT

Irq-un-Nasa is one of the commonest neuralgic pain in the lower limbs, which closely resembles to Sciatica and is clinically defined as pain in the sciatic nerve and its component, which may radiates from low back up to leg. The overall incidence of this condition ranges between 13% and 40%. It has the potential to become chronic and intractable, with significant socioeconomic implications. Conventional therapy for Irq-un-Nasa involves pharmacological, surgical or combined approaches. Pharmacological treatments typically include oral or parenteral administration of non-steroidal anti-inflammatory drugs (NSAIDs), epidural injections of anesthetics and corticosteroids, while surgical interventions may involve procedures such as hemilaminectomy or microdiscectomy. These treatments are often expensive and associated with various side effects. In contrast, Unani scholars have successfully managed this condition using oral herbal medicines and regimental therapies (Ilaj Bit Tadbeer), which are considered both safe and cost-effective. The present study was conducted to evaluate the efficacy of Habb-e-Irq-un-Nasa in the management of Irq-un-Nasa. The results demonstrate that patients experienced significant relief from severe pain, with symptoms improving to moderate or mild levels. Additionally, there was a notable reduction in tingling, numbness, and paraesthesia.

Keywords: Sciatica, Irq-un-Nasa, Unani medicine, Ilaj Bit Tadbeer

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INTRODUCTION

Sciatica is defined as the pain in the distribution of the sciatic nerve or its component nerve roots. [1] It is caused by lumbar disc prolapse, pressure over sciatic nerve passage in the buttocks or upper part of thigh or due to neuritis. In approximately 90% of the cases, sciatica is caused by a herniated disc involving nerve root compression. However, lumbar canal stenosis or foraminal stenosis and (less often) tumors or cysts are other possible causes.[1,2,3,4] It is often a pain of sharp and shooting nature and may be accompanied by other symptoms such as tingling, numbness, weakness and paraesthesia. [1,3,5] The prevalence of sciatic symptoms varies considerably ranging from 1.6% in the general population to 43% in a selected working population. Hard work and heavy weight lifting are potent predisposing factors for it. [6]

Unani physicians have discussed sciatica under the heading "*Irq-Un-Nasa*'' which is an Arabic word which means "nerve of nasa" and nasa is the name of a nerve that start from the hip joint passing down the leg (Sciatic Nerve) it also referred as "*Ringan Bao*" or "*Langdi ka dard* ". [7,8]

In classical Unani literature causes of sciatica includes derangement of humours, accumulation of *Fasid madda* in the hip joint (*Khilt-e-Damvi galeez* or *Khilt-e-balgami galeez),* inflammation of neural membrane due to exposure to cold, trauma, *Waja-ul-mafasil* (Arthritis), syphilis, the effect of poisonous substance, chronic disease of spinal cord like *zubool* etc.[7,8,9]

According to *Ibn Sina*, the line of treatment of *Irq-un-nasa* is similar to that of *'waja-ul-mafasil'* (Arthritis) and *'waja-ul-warik'* (Coaxalgia) which involves *tanqiya* or *istifragh* by evacuation of morbid material through vomiting or purgation followed by *'taskeen-e-alam tadabeer* (Pain relieving regimenal therapy) or by prescribing Unani medicine (Analgesics). [10]

In the treatment of sciatica (Irq-un-Nasa), the use of analgesics and physiotherapy may provide symptomatic relief to a certain extent, but they do not offer a definitive cure. Surgical intervention remains an option; however, it is often costly and carries the risk of recurrence even after the procedure.[11] In conventional medicine, both topical and systemic analgesics—such as non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids—are commonly employed in the management of sciatica. However, these medications are associated with potential side effects. Consequently, there is a growing need to identify safer and more effective alternatives for the treatment of this condition. In light of this, the present study was undertaken to evaluate the efficacy of Habb-e-Irq-un-Nasa in the management of Irq-un-Nasa.

MATERIALS AND METHOD

The present study was designed to assess sciatica clinically and to find out efficacy of "*Habb-e-Irq-un-nasa"* in its management. The total 35 diagnosed patients of sciatica were selected for the

study from Moalejat OPD of the reputed hospital of Unani Medical College, Maharashtra from March 2016 to August 2017. The patients fulfilling the inclusion criteria were included in the study after obtaining written informed consent, and those patients who came under exclusion criteria were excluded from the study. The total 30 were completed the study protocol.

Criteria For Selection of Cases

Inclusion criteria:

1. Diagnosed uncomplicated cases of *Irq-un-Nasa*
2. Patients between the age group of 18yrs to 60yrs.
3. Patients of either gender.
4. Not any uncontrolled systemic illnesses.

Exclusion criteria:

1. Patient below 18 years and above 60 years of age.
2. Patient suffering from systemic diseases like ischemic heart disease, diabetes mellitus, hypertension, chronic obstructive airway disease, cancer, anemia, infection and convulsion etc.
3. Spinal column deformity (Congenital and Acquired), cases of spinal injury/deformity/disease.
4. Pregnancy and lactation

Withdrawal criteria:

1. Patient not taking medicines as per the schedule explained to them.
2. Any serious adverse effect if observed.

Research Design:

Study Design: Open Label Clinical Study

Sample Size: 30

Procedure of study

The patients were selected on the basis of detailed history and clinical examination according to case report form. The selected patients were gone through the laboratory investigations that include X-ray L-S Spine, complete haemogram (Hb%, TLC, DLC, ESR), urine examination, Liver function test (LFT), Renal function test (RFT) and Random blood sugar (RBS) to make the proper diagnosis, to exclude the other systemic ailments and to assess the adverse effects of the drug on vital organs. The findings were recorded on the prescribed proforma designed for the clinical evaluation.

Total duration of the study was 3 months. Patients were called fortnightly for follow up. A total

seven visits had been planned and pre and post treatment data were collected. Each patient was given *Habb-e-Irq-un-Nasa* (*Sibr, Post Halela Zard, Suranjan Shireen*) Two Habb (Tablets) twice a day orally after meal with water. [12]

Parameters of evaluation:

Patients were assessed by visual analogue scale (VAS), straight leg raising test (SLR) test and on the basis of Modified Roland (Sciatica) Questionnaire.

The patients were examined for their subjective as well as objective parameters, before and after treatment. The prognosis was assessed mainly on the basis of relief in the sign and symptoms of the disease.

RESULTS AND DISCUSSION

The total 30 patients of sciatica were completed the trial, they received *Habb-e-Irq-un-Nasa* two tablets twice daily for three months. Responses were assessed by using visual analogue scale (VAS), straight leg raising test (SLR) test, and on the basis of Modified Roland (Sciatica) Questionnaire.

Demographic Data

1. Distribution of Sciatica Patients According to Age:

According to table 1, 30% patients were from the age 26-37 years, 53.33% patients were from age 38-49 years and 16% patients were from age 50-61 years of age group. The mean age is 40.53 years and most of the patients were between 38 to 49 years of age. This supports the information available about the prevalence of sciatica in classical literature of Ayurveda.[13]

Table 1: Distribution of Sciatica Patients according to Age:

Age (yrs)	Number of patients	Percentage (%)	P - Value
26 – 37	9	30.00	0.2118
38 – 49	16	53.33	
50 - 61	5	16.67	
Total	30	100	

2. Distribution of Sciatica patients according to gender:

According to table 2 it is found that female patients were more as compared to male patients i.e. females were 60% and males were 40% in current study. This supports the data available about the gender prevalence that females are more prone to sciatica.[14]

Table 2: Distribution of Sciatica Patients according to Gender

Gender	Number of patients	Percentage (%)	P – Value
Male	12	40.00	0.4362
Female	18	60.00	
Total	30	100	

3. Distribution of Sciatica Patients According to Occupation:

Table 3 shows that only 3.33% patients were students, 6.67 % were in business, 10% patients were in service, 16.67% were engineers, 23.33 were workers and 40% were house wives. Occupation wise distribution of studied population. Occupational history is not statistically significant. Most of the patients were house wives. This supports the data given by Panagiotis Korovessis.[15]

Table 3: Distribution of Sciatica Patients according to Occupation:

Occupation	Number Of Patients	Percentage (%)	P - Value
Student	1	3.33	0.1755
House wife	12	40.00	
Engineer	5	16.67	
Worker	7	23.33	
Service	3	10.00	
Business	2	6.67	
Total	30	100	

4. Distribution of Sciatica Patients According To Mizaj:

According to table 4 *Mizaj* distribution in studied population, 10% of the subjects belong to *Damvi*, 18% of the subjects belong to *Balgami*, 1% of the subjects belong to *Safravi* and 1% of the subjects belong to *Saudavi*. Hence assessment of *mizaj* of the patient is highly significant in *Irq-un-nasa* (sciatica) patients. It is observed that majority of the subjects 18% belongs to *Balghami* and 10% belongs to *Damvi mizaj*. This observation supports the Unani concept of *Irq-un-nasa* (sciatica). As per Unani medicines, *Irq-un-nasa* (sciatica) is a *Balghami Marz* (Phlegmatic disease).[16]

Table 4: Distribution of Sciatica Patients according to Mizaj:

Mizaj	Number of patients	Percentage (%)	P - Value
Damvi	10	33.33	0.0044
Balgami	18	60.00	
Safravi	1	3.33	
Saudavi	1	3.33	
Total	30	100	

CLINICAL DATA

SUBJECTIVE PARAMETERS

1. Pain:

According to table 5, (Effect of *Habb-e-Irq-un-Nasa* on pain) pain (VAS) of the subjects were assessed at 0, 15, 30, 45, 60, 75 and 90 days interval. The Mean was 9.10 before treatment on first visit and mean was 0.23 after treatment on seventh visit. By observing the VAS scale before and after treatment it was seen that most of the patient suffered from severe pain, at visit 1, no patients fall in moderate, mild or no pain category, during their first visit. However, the severity of the pain

declined from second visit onwards, from mean VAS from 9.10 to 6.83 which was a huge leap. These patients with reduced pain trickled into the moderate pain group.

The decline in severity further continued at a slower pace to 1.00 at the third visit, when some of them entered the mild phase. The decrease in the VAS continued further up to the sixth visit and remained stationary at the seventh visit (VAS =0.23).

At the end of the treatment with *Habb-e-Irq-un-Nasa* most of the patients recovered from severe pain and gravitated into either moderate or mild pain. The mean difference in severity between visit 1 and visit 7, p = 0.0001, was statistically highly significant indicating the concrete effect of the drug. This decline in pain is due to the analgesic (*Musakkin Alam*), anti-inflammatory (*Mohallil-e-Awram*) effect of *Suranjan* and effect of *Sibr*.[9,17,18]

Table 5: Visit wise distribution of Pain (Visual Analog Scale) - VAS:

Visits	VAS							
	Nil		Mild		Moderate		Severe	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
Visit 1	0.0	0.0	0.0	0.0	0.0	0.0	9.10	1.03
Visit 2	0.0	0.0	0.0	0.0	0.53	1.63	6.83	2.42
Visit 3	0.0	0.0	0.10	0.55	4.53	2.16	1.00	2.60
Visit 4	0.0	0.0	1.33	1.52	2.43	2.53	0.27	1.46
Visit 5	0.0	0.0	1.80	1.10	0.50	1.53	0.27	1.46
Visit 6	0.0	0.0	0.37	0.81	0.40	1.22	0.23	1.28
Visit 7	0.0	0.0	0.23	0.57	0.40	1.22	0.23	1.28

2. Presence of Tingling and Numbness:

According to table 6, it can be seen that in the first visit at the initiation of treatment tingling and numbness was present in 90% patients (27). At the second visit it declined with patients having this complaint being 22 (73%). This downward trend continued unabated till visit 7 when tingling and numbness was seen only in 6 patients being absent in 80% patients. p = 0.0001, this was statistically highly significant. This reduction in tingling and numbness may be due to mufatt-e-sudad effect of Sibr [9,19] and Suranjaan.[17]

Table 6: Presence of Tingling and Numbness

Visits	Tingling and Numbness				P - value
	Present		Absent		
	No.	%	No.	%	
Visit 1	27	90.00	3	10.00	**0.0001**
Visit 2	22	73.33	8	26.67	
Visit 3	15	50.00	15	50.00	
Visit 4	14	46.67	16	53.33	
Visit 5	6	20.00	24	80.00	
Visit 6	4	13.33	26	86.67	
Visit 7	6	20.00	24	80.00	

3. Presence Of Paraesthesia:

According to table 7, it can be seen that in the first visit at the beginning of treatment with *Habb-e-Irq-un-Nasa* paraesthesia were present in 86.67% patients (26). At the second visit it declined with patients having this complaint being 19 (63.33%). This downward trend continued further till visit 7 when paraesthesiae was seen only in 2 patients being absent in 93.33% patients. p = 0.0001, this was statistically highly significant.

Table 7: Presence of Paraesthesia:

Visits	Paraesthesia				P - value
	Present		Absent		
	No.	%	No.	%	
Visit 1	26	86.67	4	13.33	0.0001
Visit 2	19	63.33	11	36.67	
Visit 3	10	33.33	20	66.67	
Visit 4	5	16.67	25	83.33	
Visit 5	2	6.67	28	93.33	
Visit 6	2	6.67	28	93.33	
Visit 7	2	6.67	28	93.33	

OBJECTIVE PARAMETERS:

1. SLR Test Results:

According to table 8, The Straight leg Raising test (SLR), the hallmark for sciatica was positive in 100% of patients at the first visit and cascaded downwards to 3.33% in the last visit (visit 7). p = 0.0001. *Habb-e-Irq-un-Nasa* showed a statistically highly significant effect as 96.67% showed negative SLR test. This effect is achieved due to the *Mufatteh sudad, Mohallil-e-warm* and *Musakkin-e-Alam* effect of *Sibr* and Suranjaan. As well *mushile balgham raqeeq* and *muhallila-e-wram* effect of Post Halela zard.[12,20]

Table 8: SLR Test Results

Visits	SLR TEST				P - value
	Positive		Negative		
	No.	%	No.	%	
Visit 1	30	100	0	0.0	**0.0001**
Visit 2	30	100	0	0.0	
Visit 3	29	96.67	1	3.33	
Visit 4	18	60.00	12	40.00	
Visit 5	7	23.33	23	76.67	
Visit 6	2	6.67	28	93.33	
Visit 7	1	3.33	29	96.67	

2. Presence of Lasegue's Sign:

According to table 9, Lasegue's sign was positive in 100% of the patients when at the beginning of the treatment. It declined towards negativity from visit 3 (being positive in 29 patients).Then it showed a steep fall till it reached to the bottom. p = 0.0001, this was statistically and visually highly significant as seen in the graph below.

Table 9: Presence of Lasegue's Sign:

Visits	Lasegue's Sign				P - value
	Positive		Negative		
	No.	%	No.	%	
Visit 1	30	100	0	0.0	**0.0001**
Visit 2	30	100	0	0.0	
Visit 3	29	96.67	1	3.33	
Visit 4	18	60.00	12	40.00	
Visit 5	7	23.33	23	76.67	
Visit 6	2	6.67	28	93.33	
Visit 7	1	3.33	29	96.67	

3. Modified Roland Questionnaire Scores in grades of modified Roland questionnaire (Before Treatment):

The Modified Roland Questionnaire is a measure of HRQOL i.e. low back pain leading to conceptual spectrum of Health-Related Quality of Life.

The factors of HRQOL are as follows:

Physical component, Emotional component, social component, Pain, Mental Health, Vitality General Factors, Disability.

A validated assigned numerical interpretation of these items leads to a Modified Roland Score (questionnaire).[21]

The Mean Modified Roland Score before the treatment was 20.23, which indicates overall severe category considering all above factors in majority of patients.

Table 10: Scores in Grades of Modified Roland Questionnaire (before treatment):

Scores in Grades	Modified Roland Questionnaire (before treatment)	
	Visit 1	
	Mean	±SD
Mild	0	0.0
Moderate	0	0.0
Severe	20.23	1.65

Scores in grades of modified Roland Questionnaire (After completion of treatment):

Table 11 shows The Mean Modified Roland Score before the treatment was 20.23, (Shows in table & graph no.10) The mean Modified Roland Score after complete treatment was 0.57 as far as severity is concerned, which is much below the initial score at the start of treatment.

Table 11: Scores in Grades of Modified Roland Questionnaire (after complete treatment):

Scores in Grades	Modified Roland Questionnaire (after complete treatment)	
	Visit 7	
	Mean	±SD
Mild	4.00	1.91
Moderate	1.20	3.66
Severe	0.57	3.10

Scores in Grades of Modified Roland Questionnaire (before and after Completion of treatment) The effect of *Habb- e -Irq-un-Nasa*:

TABLE 12 shows The Modified Roland Scores which were used as markers of sciatica before and after treatment showed a striking comprehensive decline in severity from 20.23 (visit 1) to 0.57 (visit 7). The difference between mean severity scores before and after treatment was statistically highly significant as calculated by the students t-test. (p = 0.0001)

Table 12: Scores in Grades of Modified Roland Questionnaire (before and after completion of treatment)- The effect of Habb- e -irq-un-Nasa:

Scores in Grades	Modified Roland Questionnaire (before and after completion of treatment)			
	Visit 1		Visit 7	
	Mean	±SD	Mean	±SD
Mild	0	0.0	4.00	1.91
Moderate	0	0.0	1.20	3.66
Severe	20.23	1.65	0.57	3.10

Visit wise Scores in Grades of Modified Roland Questionnaire (after Treatment):

table no.13 shows as multiple groups are involved, analysis of variance was used to estimate the statistical significance (ANOVA).

ANOVA: F = 11.256 p = o. ooo1

The visit wise comparison is shown in the table no. 13. It indicates the total follow up of mild, moderate and severe cases across the visits. Severity of pain decreased from visit 1 to visit 7 as the cases trickled towards moderate and mild category indicating the effect of the *Habbe- Irq-un-Nasa*. This was statistically highly significant as seen by the ANOVA test. (p = 0.0001)

Table 13: Visit wise Scores in Grades of Modified Roland Questionnaire (after treatment):

Visits	Modified Roland Questionnaire (after treatment)					
	Mild		Moderate		Severe	
	Mean	±SD	Mean	±SD	Mean	±SD
Visit 1	0	0.0	0	0.0	20.23	1.65
Visit 2	0	0.0	2.03	1.65	15.57	6.32
Visit 3	0.37	2.01	12.83	5.23	1.77	5.40

Visit 4	2.27	4.23	9.37	5.82	0.57	3.10
Visit 5	7.43	3.53	1.73	4.50	0.57	3.10
Visit 6	5.57	2.47	1.20	3.66	0.57	3.10
Visit 7	4.00	1.91	1.20	3.66	0.57	3.10

CONCLUSION

Sciatica is one of the commonest neuralgic pain creating difficulty and problems in activities of daily living. Modern medicines are effective but have adverse effects in long term. Considering these facts people are seeking safe, effective and pocket friendly treatment, which is fulfilled by Unani medicine. Unani scholars have mentioned different modalities of treatment of sciatica, among them are oral medicine. One of the most effective oral medicines is *Habb-e-Irq-un-Nasa*. The Treatment for sciatica is preliminary aimed at to control and reduce the pain by means of conservative treatment or surgical techniques. Therefore the scholars had selected safe, having minimal side effect, easily available and most economical test drug for the same. Hence clinical study to evaluate the efficacy of *Habb-e-Irq-un-Nasa* in the management of *Irq-un-nasa* (Sciatica) was carried out. The study was an open label clinical study. The total duration of the study was 90 days with the total seventh follow ups on every 15th day for 90 days. Patients were diagnosed on the basis of clinical presentation, general physical and neurological examinations. The demographic and clinical data subjective parameters and objective parameters were collected in details. Collected data were analyzed and observed by using MS Excel, student t test and ANOVA test, by using SPSS software 20. All the results debated in discussion section. It can be determined by current study that maximum patients like females, workers and housewives from 38-49 yrs of age belong to *Balgami* and *Damvi Mizaj* are more prone to get involve in Sciatica.

At first visit, all patients were having severe pain, tingling and numbness, paraesthesia but at the end of the treatment with *Habb-e-Irq-un-Nasa* most of the patients significantly recovered from severe pain and gravitated into either moderate or mild pain, and showed reduction in tingling and numbness and paraesthesia. At first visit, all patients were having positive SLR test, Lasegue's sign but at the end of the treatment with *Habb-e-Irq-un-Nasa* most of the patients significantly showed negative SLR test and Lasegue's sign. The outcomes of this study indicate that Habb-e-Irq-un-Nasa is effective in the management of Irq-un-Nasa. These findings highlight the importance of conducting further clinical trials based on the principles of Unani medicine, in order to alleviate patient suffering and maximize therapeutic benefits.

REFRENCES

1. Aspi Gollwalla F., Shahrukh Golwalla A., Medicine for students, The National Book Depot, Mumbai, 22nd edition,2008:593-596.

2. Ernst Schneider, Healthy by nature, Vol.2, Ibergraphi, Spain, 1st edition, 2008: 251.
3. Michael Swash, Michael Glynn, Hutchison's clinical method-an integrated approach to clinical practice, Saunders, Elsevier, 22nd edition,2007:147-149.
4. John Crawford Adams, David Hamblen L, Outline of Orthopedics, Churchill Livingstone, 13th edition, 2001: 198-205.
5. David Maggee J, Orthopedics Physical Assessment, Saunders, 5th edition, 2007: 6,9,559.
6. Konstantinou K, Dunn KM (2008) Sciatica review of epidemiological studies and prevalence estimates. Spine (Phila Pa 1976) 33: 2464 -2472.
7. Samarkhandi Najibudeen, Moalijath Sharh-e-Asbab, Part 1, Translation by Kabeerudeen M., Idara Kitab-us-Shifa, New Delhi, 2009: 175-177.
1. 8.Qurshi M.H., Jami-ul-Hikmat, Idara Kitab-us-Shifa, New Delhi: 1028-1030.
8. Majoosi Abul Hasan Ali Bin Abbas, Kamil-us-Sana, Urdu translation by Kantoori G.H., Idara Kitab-us-Shifa, New Delhi, 2010:397- 543.
9. Azam Khan, Akseer-e-Azam, Ejaz Publishing House, New Delhi, 2010: 847.
10. Geeta V. Sathavane, Darshana H. Pandya, An international Quarterly journal of research in Ayurveda.2015 (jan-march;36(1):41-45.
11. Khan MA. Qarabadeene Aazam. New Delhi: Aijaz Publishing House 1996:78.
12. Raghavendra V. Vidyapeeth –Basti chikitsa-a new dimension in gridhrasi an open clinical trial, March 2007, Rashtriya Ayurveda Vidyapeeth (national Ayurveda vidyapeeth) Delhi: 199.
13. Wáng et al. Increased low back pain prevalence in females than in males after menopause age: evidences based on synthetic literature review Quant Imaging Med Surg. 2016 Apr; 6(2): 199–206.
14. Korovessiset al, Low Back Pain and Sciatica Prevalence and Intensity Reported in a Mediterranean Country: Ordinal Logistic Regression Analysis December 2012. 35 (12): 1775-1784.
15. Razi Zakariya, Al Havi fit Tib, Vol 11., CCRUM, New Delhi, 2004: 75-77,84,88,89,96,99,114,115,129,174.
16. Ghani N. Khazainul Advia. 1st New Delhi: Idara Kitab ul Shifa.1971:113,175-178,308-312,335-336,861-862,869-870,1231-1233,1355-1356.
17. Haleem MA. Mufradate. Azizi. CCRUM New Delhi: Dept of AYUSH, Minister of H & FW Govt. of India: 2009: 17,21,26, 29,33,36,52, 54,55,66,85,91,102,115,117.

18. Nadkarni KM. Indian Materia Medica. Vol.1st ,3rd ed. Mumbai: Popular Prakashan private Limited; 2009: 73-74,172-174,242-246,969-972,1205- 1210,1308-1315.
19. Anonymous. National Formulary of Unani Medicine. Part-III, 1st ed. New Delhi: CCRUM, Ministry of H& F.W.Govt. of India; 2001: 15-18,149.
20. Patrik Donald et al. Assessing Health –Related Quality of Life in Patients With Sciatica :SPINE. 20 (17), Lippincott-Raven Publishers; 1899- 1909.