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Case Report

Unani Integrative Approach for the Management of Sciatica, Employing Pharmacotherapy with Regimenal Therapy: A Case Report

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Abstract

Sciatica, a subtype of low back pain (LBP) is one of the most common clinical complaints in primary care which is characterized by pain that originates in the lower back or buttocks and radiates down one or both legs along the distribution of the sciatic nerve. It commonly results due to nerve root compression by a prolapsed lumbar disc. Sciatica affects both genders equally and has an annual incidence of 1-5%, most common in 30-65 years of age. The management of sciatica includes non-pharmacological, pharmacological and surgical approaches. Combining these management techniques can help in pain reduction and thereby can lead to an overall wellbeing of the individual. In this case report we present the case of a 52 year old male patient with lower back pain radiating to left lower limb who came to Department of Regimenal therapies, National Institute of Unani Medicine, Bengaluru. The patient had taken NSAIDs and other measures for pain management from last 6 months. Despite taking exhaustive measures, no significant improvement was seen. The symptoms have gotten worse over the past two months. After complete clinical examination and diagnosis, the patient underwent treatment for 4 weeks using integrative approach in the form of unani pharmacotherapy, coupled with regimenal therapy. Many objective parameters were used to evaluate the patient both before and after the intervention. The assessment parameters after the intervention reported a significant amelioration of the symptoms. Our study suggested that, management of sciatica with an integrative strategy can be considered.

Keywords: Sciatica, LBP, lumbar disc, Integrative therapy, NSAIDs, Regimenal therapy.

INTRODUCTION

Sciatica is a common yet potentially disabling illness.[1] It is a disease of musculoskeletal system where pain originates from the lower back and radiates down one or both legs along the distribution of the sciatic nerve. The main cause of sciatica is the compression of L4-S1 nerve roots by herniated inter vertebral discs. The compression of L5 or S1 nerve roots causes pain from the back or side of the leg to the foot and toes, and compression of L4 nerve root causes pain in anterior and lateral thighs.[2] It may be accompanied by tingling, numbness, or weakness in the affected leg. The severity of sciatica can vary from mild discomfort to severe pain that can impact daily activities and quality of life. Low back pain is the major cause of years lived with disability worldwide, with 60% of these patients reporting symptoms of sciatica.[3] Studies on the global burden of the disease from 1990-2020 showed substantial rise in the prevalence of low back pain over the years. In 1990 low back pain accounted for 43.4 million for all ages and genders globally, whereas in 2020, the number rose to 619 million cases. The number of cases of low back pain is predicted to rise to 843 million by 2050, with the biggest increases anticipated to occur throughout Africa and Asia. The risk of low back pain associated with smoking is highest in middle-aged (50–69 years old) males and lowest among women between 25–49 age range (5·7%) whereas the risk attributed to occupational ergonomic factors was highest among younger males between 25-49 years of age (34·3%) and lowest among females of 70 years of age or older (4·9%).[4] As far as the management of sciatica is concerned, it is primarily managed with conservative (non-operative) approach and in severe cases with surgical (operative) measures. Conservative approach which includes pharmacological as well as non-pharmacological management is preferred choice of treatment as it avoids or delays the need for surgical management. In Unani system of medicine , sciatica is known as *Irq al-Nasa* and *Rengan* which is a subtype of

Waja-ul-Mafasil and has been described as a pain that initiates from lower back and radiates up to knee or ankle joint on the lateral aspect of the lower limbs.[5,6] According to some Unani scholars, *Irq al-Nasa,* or sciatica, is an Arabic term that literally translates to "name of a nerve." which starts from gluteal region and continues up to the ankle, and pain associated with nerve is termed as *Irq al-Nasa*.[7] *Ibn-e-Sina* (Avicenna) (980-1037AD) elaborated *Irq al-Nasa as one of the types of* arthralgia characterized by hip pain which radiates toward the groin up to the ankle.[8]*Mohammad Ismaeel Jurjani* (930-994 AD) described the pain which originates from ischail joint and radiates toward leg is known as *Irq al-Nasa*[9].*Ibn-e-Hubal Baghdadi* (1213 A.D.) define *Irq al-Nasa as* Razi (865-925 A.D.) with the addition as "a pain starts from hip and radiates from the lateral of the thigh up to calf muscles.[10] *Abu Marwan Abdul Malik Ibne Zuhar* (1092-1162) quoted about *Irq al-Nasa* that this pain sometimes originate from foot and radiates up to upper most part of the thigh and provides discomfort.[11] Considering the patho-physiology and causes of *Irq al-Nasa,* Unani scholars mentioned that the cause of *Irq al-Nasa* are derangement in *Akhlat* (Body fluids/humour's) either *Khilt-e- Damwi Ghaleez* (viscid sanguineous humour) *Khilt-e- Balghami Ghaleez(viscid phlegmatic humour)* which deposit in *Mafsil-i-Warik* (hip joint) and leads to pain, sometimes it may cause dislocation of joint. There is involvement of *maddah* in *Irq-al-Nasa,* this *maddah* may be *Khilt-e- Damwi. (sanguineous humours) Khilt-e- Balghami, (phlegmatic humour) Makhloot Balgham wa Safra (mixed phlegmatic bilious).*[12] The management of sciatica according to Unani system of medicine is based on the basic fundamentals, which includes *Tanqiya-e-Mawad-e-Fasida* (Cleansing and elimination of morbid material), *Tahleel-e-Warm* (Resolution of inflammation) ,*Taskeen-e-Dard* (Pain relief) with a combination of various drugs and regimenal therapies having *musakkin* (Soothening) and *muhallil* (Anti-inflammatory) effects. We present a case of sciatica with a poor response to NSAIDs and other therapeutic measures. We combined unani pharmacological therapy with regimenal therapy (wet cupping or *Hijamah*) to provide a safe and effective early treatment option.

CASE REPORT

A 52 year old male came to Department of Regimenal therapies, National Institute of Unani Medicine, Bengaluru with complaints of lower back pain and left buttock pain radiating down the posterior aspect of his left lower limb into his foot from last 6 months with alleged history of heavy weight lifting. Patient stated that, he had constant low back pain from last 6 months, which has exaggerated in severity from the last 2 months. The patient had taken NSAIDs and also have also consulted a physiotherapist. He also visited a chiropractor and acupuncturist for the same complaint but had limited results. The pain aggravated on walking, lifting some heavy weight and sitting or standing for a prolonged duration and after bike or car driving. The patient has done MRI two months back, which revealed multilevel disc degeneration at L4/L5, L5/S1 with moderate lumbar stenosis at L4–L5 secondary to an annular bulge and facet hypertrophy. Along with physical examination, various tests and assessments were performed at baseline and post intervention using various scales to determine the actual condition of the patient.

The assessment parameters used were:

- Visual Analog Scale (VAS) for pain
- Straight Leg Raise Test (SLR) to assess degree of nerve root compression
- Roland-Morris Disability Questionnaire (RMDQ) to assess the impact of low back pain on daily life.

INTERVENTION

The patient underwent wet cupping therapy (WCT) once a week for 4 weeks. All the required investigations namely Hb%, BT, CT, HBsAg, HIV I, HIV II and FBS were done before WCT. Total 6 cups of large size (6.5 cm diameter) were applied from area of hip joint to left lower limb in the following manner, 1 cup at L4/L5, 1 cup at L5/S1, 2 cups at back of thigh and 2 cups in calf muscles.

The following procedure was followed for *Hijama*:

STEP 1- Patient was asked to lie in prone position and the targeted area was exposed, shaved and cleaned with antiseptic solution.

STEP 2- Mild suction was given to create negative pressure for 1 minute and then 12-15 small longitudinal, superficial incisions were made with 11 No. surgical blades followed by strong suction so that the cups will tightly adhere to the skin.

STEP-3 - The blood was allowed to flow freely from the incisions, till it coagulates or till the requisite blood was evacuated.

STEP 4- Once the blood flow had stopped, the vacuum pressure was released, followed by collecting the blood and cleaning the incisions properly with antiseptic solution followed by proper dressing.

Patient was advised to abstain from any exertional activity on that day. Along with regimenal therapy, patient was prescribed an oral drug, *Habbe gul-e-aakh* , two tablets to be taken twice daily for 4 weeks as analgesic. The tablets were prepared in the pharmacy of National Institute of Unani Medicine, Bengaluru, as per guidelines of NFUM (National Formulary of Unani Medicine) or *Al Qarabadeen*.

INGREDIENTS OF *HABBE GUL-E-AAKH* [13]

Unani name	Botanical names	Weight (g)	Parts used
Zanjabeel	*Zingiber officinalis Roscoe.*	100g	Rhizome
FilfilSiyah	*Pipernigrum Linn.*	100g	Fruit
GuleMadar	*Calotropis gigantea Linn*	100g	Flower
Barge Bans	*Bambusa arundinacea Willd.*	100g	Leaf

RESULTS

Visual Analogue Scale (VAS)

The patient was asked to rate his back pain on VAS scale at the baseline and post intervention on 4th week as shown in Table 1. The VAS scale is used for assessment of severity of pain, where 0 indicates no pain at all and 10 indicates extreme pain which requires immediate medical attention.

Table 1: Showing VAS Scores at Baseline, and 4th week.

Visual Analog Scale (VAS) scores for pain		
	Baseline	4th Week
Lower back	6/10	5/10
Left Lower limb	6/10	4/10

Straight Leg Raise Test (SLRT)

SLRT is primarily used to evaluate the presence of nerve root irritation or lumbar disc herniation. The score is between 0-3 depending upon the severity of pain and degree of leg raising, where 0 is (Normal) score for leg raising over 90°, 1 (mild) for 51-70°, 2 (moderate) for 31-50° and 3 (severe) score for leg raising upto 30°. Table 2 shows SLRT score for lower back and left lower limb at baseline and on 4th week.

Table 2: Showing (SLRT) Scores at Baseline, and 4th week.

Straight Leg Raise Test (SLRT)		
	Baseline	4th Week
Rt leg	0 at 90°	0 at 90°
Lt leg	2 at 45°	1 at 70°

Roland-Morris Disability Questionnaire (RMDQ)

RMDQ is used to assess the impact of low back pain on daily life. It has scores from 0-24, where low score (0-4) indicates minimal disability with a low impact on daily activities, moderate score (5-14) suggests moderate disability and a noticeable impact on daily activities and high score (15-24) indicates severe disability and significant limitations in performing daily activities. Table 3 indicates RMDQ score at baseline and on 4th week.

Table 3: Showing (RMDQ) Scores at Baseline, and 4th week.

The Rolland Morris Low Back Ache and Disability questionnaire		
	Baseline	4th Week
Rolland and Morris low back pain and disability questionnaire (RMQ)	18	11

DISCUSSION

LBP is becoming one of the leading causes of disability worldwide. Administration of NSAIDs provide short term relief for pain and are associated with additional adverse effects. The only possible intervention which can cure the condition is surgery. Therefore, to minimize the need for surgical interventions, there is increasing interest in complementary and alternative medicines for the management of low back pain (LBP). In the Unani System of Medicine, it is believed that diseases disturb the body's natural balance of temperament and humors. To address this, Regimenal Therapy (*Ilaj bit Tadbeer*) and Pharmacotherapy (*Ilaj bil-Dawa*) have been used since ancient times to restore this balance and correct any imbalances in temperament. This study represents the first documented case demonstrating the effects of combining pharmacotherapy with regimenal therapy for managing sciatica. The *"Hijamah"* was performed once a week for 4 weeks along with an oral medicine *Habbe gul-e-aakh* which has anti-inflammatory and analgesic properties.[14] After the intervention, the patient reported amelioration of symptoms, which was also reflected by improved assessment scores. The differences in the assessment scores before and after treatment are illustrated in Figures A, B, and C below.

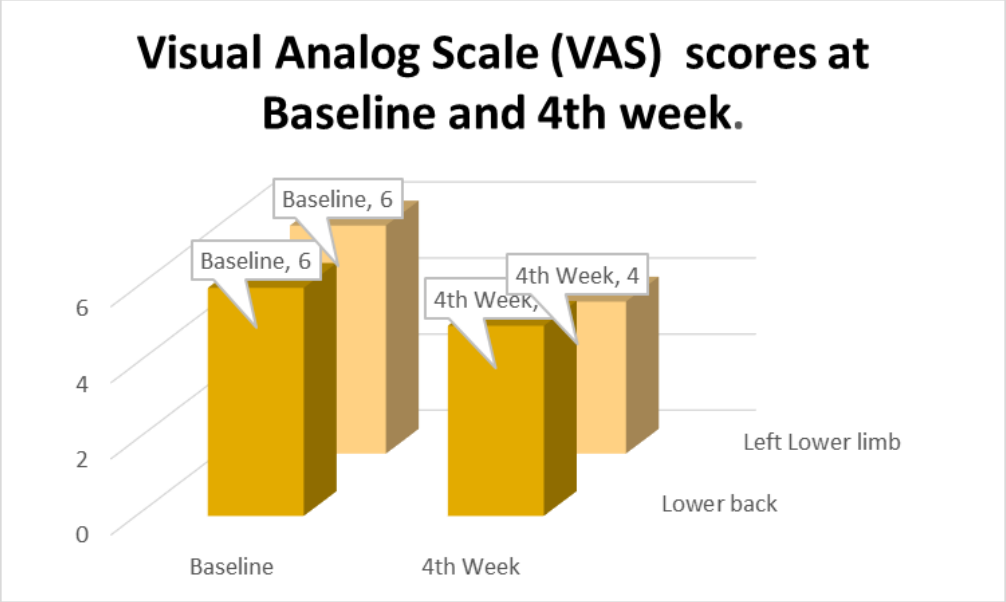

Figure A: Bar diagram showing VAS Scores at Baseline, and 4th week.

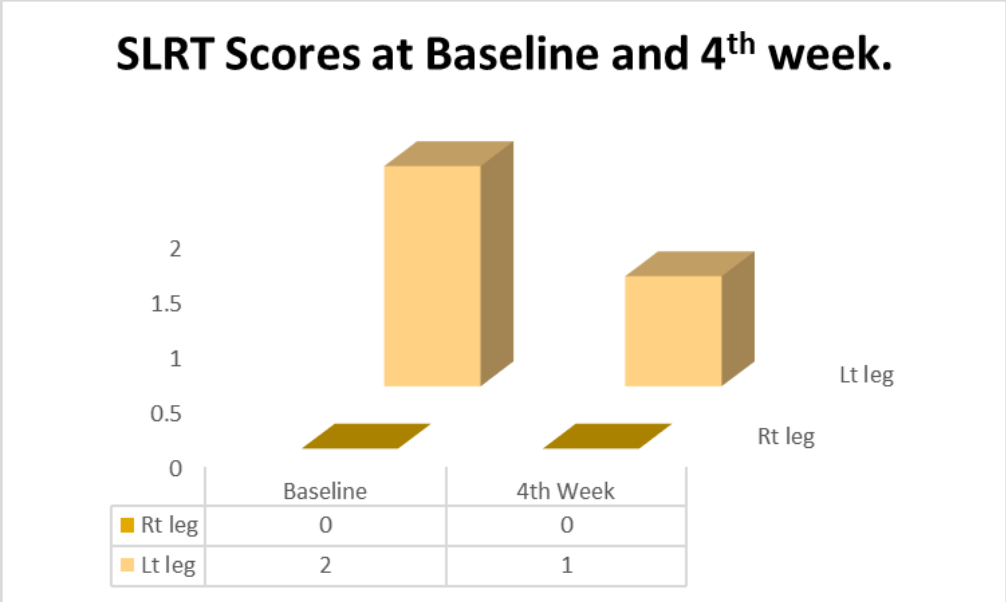

Figure B: Bar diagram showing SLRT Scores at Baseline, and 4th week.

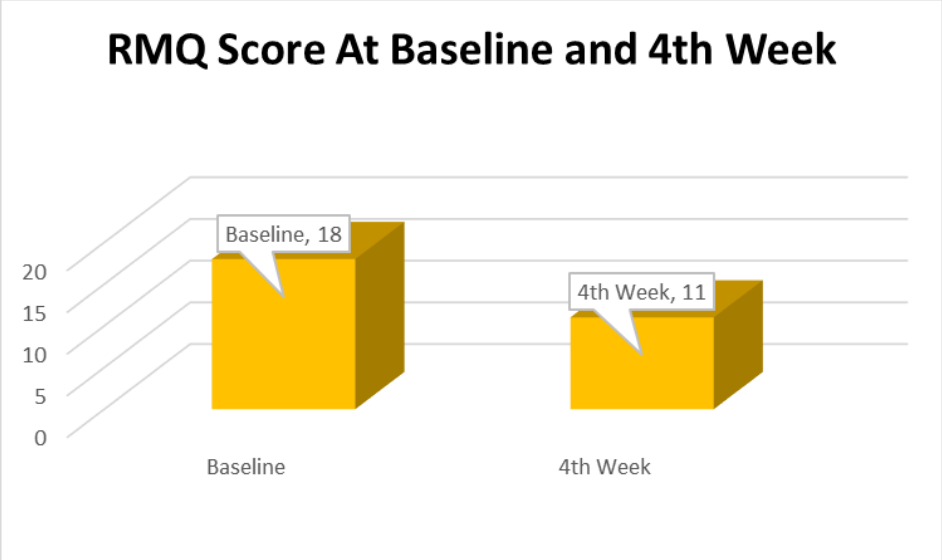

Figure C: Bar diagram showing RMDQ Scores at Baseline, and 4th week.

The actual mechanism behind the pain relief is not clearly understood. It is believed that cupping therapy enhances the blood circulation, drains excessive fluid and removes toxins and other waste from the body. The loss of blood due to incisions in the cupped region causes vasodilation which increases the parasympathetic activity and relaxes the body muscles which in turn reduces the pain scores. Moreover the loss blood, improves the quality of the remaining blood which helps in pain reduction.[15] This correlates well with the Unani concept which is based on the principle of evacuation (*Tanqiya*) which involves elimination of harmful humors (Akhlat-e-Faasida) and excess fluids from the body and diversion (*Imaala)* which *refers* to the diversion of the morbid fluids from the site of affected organ to the site from where it can be easily expelled from the body tissues. The effectiveness of this therapy may also be attributed to the antiinflammatory (*Muhallil*), and analgesic (*MusakkinAlam*) properties of *Habbe gule aakh.*

CONCLUSION

The results of the case study suggests that WCT might reduce inflammation and pain, making it a potential option for treating sciatica. Throughout the study, no local or systemic side effects, including localized reactions or itching, were noted. Therefore, it is advisable for sciatica patients to try this method to avoid the negative effects of long-term NSAIDs use and to consider it as an alternative, before opting for surgery, which is often unsuccessful and carries high risks.

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Ethical Clearance

This study is approved from Institutional Ethical Committee for Biomedical Research.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

REFERENCES

1. Adjien CK, Gnonlonfoun D, Dochamou C, Donald A, Houinato D. Epidemiological, clinical and etiological aspects of sciatica in hospital setting, CNHU-HKM Cotonou. Neuroscience and Medicine. 2018 Nov 27;9(04):171-179. https://doi.org/10.4236/nm.2018.94017

2. Qiangqiang W, Yingang L. Research Progress of Chinese Medicine in the Treatment of Sciatica. Academic Journal of Medicine & Health Sciences. 2023 Dec 30;4(12):35-41. https://doi.org/10.25236/AJMHS.2023.041205

3. Maslak JP, Jenkins TJ, Weiner JA, Kannan AS, Patoli DM, McCarthy MH, Hsu WK, Patel AA. Burden of sciatica on us Medicare recipients. JAAOS-Journal of the American Academy of Orthopaedic Surgeons. 2020 May 15;28(10):e433-439. https://doi.org/10.5435/JAAOS-D-19-00174

4. Ferreira ML, De Luca K, Haile LM, Steinmetz JD, Culbreth GT, Cross M, Kopec JA, Ferreira PH, Blyth FM, Buchbinder R, Hartvigsen J. Global, regional, and national burden of low back pain, 1990-2020, its attributable risk factors, and projections to 2050: a systematic analysis of the Global Burden of Disease Study 2021. The Lancet Rheumatology. 2023 Jun 1;5(6):e316-329. https://doi.org/10.2139/ssrn.4318392

5. Majusi AA, Kamil-us-Sanaah. (Urdu; translation by Ghulam Hasnain Kantoori), Vol 2, New Delhi: Idara Kitabu-ush-Shifa, 2010, 543-546.

6. Khan A, Al Ikseer-e-Azam. (Urdu: translation by Hakeem Kabeeruddin),New Delhi: Eijaz Publishing House, 2010, 847-849.

7. Qarshi MH. Jameul Hikmat. New Delhi: Idarae kitabulsh-hifa, 2011, 1028.

8. Ibn-e-Sina. Al-qanoon fit tib (Urdu: translated by Ghulam Hasnain Kantoori), Vol 3. Lahore: Sheikh Mohammad Bashir & Sons. YNM, 274-277.]

9. Jurjani A. Zakheera khwarizm shahi. (Urdu: translated by Hakeem Hadi Husain Khan), Vol 6. Lucknow: Matba Munshi Nawal Kishore. YNM; 637-651

10. Bagdadi IH. Kitabul mukhtarat fit-tib (Urdu translation), Vol. 4. New Delhi: CCRUM, 2005, 277- 278

11. Majusi AA, Kamil-us-Sanaah. (Urdu; translation by Ghulam Hasnain Kantoori), Vol 2, New Delhi: Idara Kitabu-ush-Shifa, 2010, 543-546

12. Razi Z. Kitab-ul- hawi (Urdutranslation), Vol.11. New Delhi: CCRUM, 2004, 75-188. 13. Khan A. Hazique (Urdu). Delhi: Jaseem Book Depot, 1983, 538-5401

13. Kabiruddin. Al-Qarabadeen. 3rd Ed. New Delhi: CCRUM; c2006. p. 183-186, 466-468, 1210-1215.

14. Nafees M, Khan NA, Amin KMY, Ahmad G. Evaluation of anti-inflammatory activity of Habbe Gule Aakh in albino rats. Hippocrat J Unani Med 2012;7:1e9.

15. Al-Bedah AM, Elsubai IS, Qureshi NA, Aboushanab TS, Ali GI, El-Olemy AT, Khalil AA, Khalil MK, Alqaed MS. The medical perspective of cupping therapy: Effects and mechanisms of action. Journal of traditional and complementary medicine. 2019 Apr 1;9(2):90-97. https://doi.org/10.1016/j.jtcme.2018.03.003