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Case Report

Unani Approach to the Management of Irqunnasa (Sciatica): A Case Report

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ABSTRACT

Objective: This case report focuses on a 65-year-old man who presented with a unique bilateral complaint of pain radiating from the lower back to the ankles and the dorsum of the feet, diagnosed clinically as sciatica, which typically presents unilaterally.

Case Report: The patient was treated using a holistic approach that combined the Unani medicine Habb-e-Suranjan and the manipulative therapy Hijama Mutaharrika over a two-month period. At the end of the treatment, the patient reported a pain severity of 2 on the Visual Analog Scale (VAS), demonstrating the efficacy of the holistic Unani therapeutic approach.

Conclusion: Hijama Mutaharrika can relieve symptoms for patients suffering from sciatica.

Keywords Irqunnasa, Sciatica, Radiculopathy, Spondylolisthesis, Unani medicine

INTRODUCTION

Sciatica is pain radiating from the buttock down the lower extremity that is caused by compression or injury to the sciatic nerve. It is the most common form of lumbosacral radiculopathy, usually resulting from a herniated disc or spinal stenosis in the low lumbar spine. Characteristic features of sciatica include burning, stabbing, or aching pain, which may be accompanied by weakness and numbness in the lower extremity. Diagnosis is usually clinical, supported by findings from maneuvers such as the straight leg test. Imaging may be considered if there are red flags for acute back pain, diagnostic uncertainty, or refractory symptoms. Most cases are self-limiting, with symptoms resolving within three months; conservative management can be used for symptom control but supporting evidence for most interventions is weak.[1] It has been observed that despite opting for various types of interventions i.e., drugs, physical therapies and surgical interventions, patients are not completely satisfied with treatment of low backache.[2]

In Unani medicine, *Waja al-Khāsira* is a pain of the lower portion of back, whereas *Irqunnasa* is a specific type of pain which originates from lumbosacral joints and runs along with the sciatic nerve.[3,4] Intensity of pain increases with the quantity of matter which may cause wasting of the muscles of legs due to disuse.[4]

Unani system of medicine provides wide range of treatment approaches for this condition. *Zakariya Razi* stated that *Huqna* (enema) is more effective than purgation in Irqunnasa.[4,5] If thick and sticky humors are deposited in lumbosacral joint, application of Hijama becomes imperative to be employed in its management. Furthermore, he stated that if humors are deposited in the involved joints due to improper management. Thus, Hijama is very advantageous for such type of musculoskeletal condition. *Ali bin Abbas Majoosi* has written in Kāmilus Sana'a that when the disease progressively becomes chronic and non-responsive to the drugs, *Hijama Nariya* is essential to be used for control of such condition as it diverts the morbid matter from affected joints towards the skin. *Ibn Sina* mentions that management of Irqunnasa through cupping therapy is more efficacious than pharmacological interventions. *Ismail Jurjani* stated that in case of sedentary life-style, patient should be kept on fasting and exercise after general evacuation. If these measures do not work, Hijama Nariya should be considered for drawing out the morbid humors. Repeated attempts of Hijama by sucking the liberal amount of blood generally relieve the condition by eliminating morbid materials from the joints.

Mahjama Nariya is used preferentially to help warm up any cold-tempered body organ. When air accumulates in any part of body, it is more effective as in the management of intestinal colic caused due to flatulence. Gruner, a renowned orientalist, has stated a special type of Hijama therapy in al-Qanun fi al-Tib (the Canon of Medicine) by Avicenna where Hijama glasses are moved in gliding fashion on the affected part of body for the diversion of morbid humors.[6] Hijama is also performed to reduce the intensity of pain related to any part of body either by diverting the morbid matter away from the painful site or removal of trapped morbid air. Therefore, Hijama is prescribed

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in sciatica in medial as well as dorsal aspects of thigh.[7]

Hijama has effective potential in restoration of normal size of an atrophied body organ as well as hypertrophied organ. The desirable objective is accomplished by applying cups in the adjacent area which diverts the morbid material to the site of *Hijama* and results in the reduction of size of the concerned organ.[8]

Low back pain affects 60 to 80 percent of adults at different stage of their lives.[9] In sciatica, acute pain (pain duration <8 weeks) starts radiating from lower lumber region along the course of sciatic nerve.[10] Compression of sciatic nerve (L2-L5) occurs due to heavy weight lifting, strenuous exercise, disc protrusion, disc degeneration often precipitated by trauma or genetic factors.[11] Perception of severe pain may be in the buttock region which radiates upto the toe. The intervertebral disc is composed of nucleus pulposus and annulus fibrous.[12] Nucleus pulposus may rupture or bulge via annulus fibrous, exerting pressure on the nerve endings in the spinal ligaments, degenerative joint changes in the vertebral columns or pressure on the nerve roots. It is characterized by pain in lower lumbar region that radiates down along the path of sciatic nerve with numbness along the course of the sciatic nerve.[13] In conventional medicine, it is managed with anti-inflammatory analgesics, physiotherapy, or surgical intervention which is very costly compounded with invasive and increased risk of recurrence.[14]

CASE STUDY

A 65-year-old man with a height of 160 cm and weight of 67 Kg, manual labourer by profession from Prayagraj visited the Ilaj-bit Tadbeer OPD of State Unani Medical College & Hospital, Prayagraj with the chief complaint of chronic low backache and tingling sensation for past 6 months. The patient stated that the pain started insidiously and slowly became sharp, shooting and burning in nature accompanied with numbness, initially located just medial to the right, and left posterior sacro-iliac joints radiating bilaterally to the buttocks, thighs, calf muscles and up to the ankle joints accompanied with tingling sensation felt over both the dorsum of foot (R>L). There was no obvious history of trauma and injury. Similarly, the patient had no history of neurologic or orthopedic problem.

Meanwhile, the patient took allopathic treatment including Ibuprofen 400mg 3 times daily and got merely symptomatic relief temporarily. He also consulted the physiotherapy for more than two months but had negligible improvement in the intensity of pain. Many days were lost at work due to pain as the bed rest was necessary for pain relief. General condition of the patient was distressing with severe pain having an antalgic gait. He was unable to sit and walk properly due to persistent nature of pain. SLRT was positive at 30 degrees on both side of leg (R>L). Blood pressure was 124/86mmHg. Pulse rate recorded 82/Minute. There was no family history. He was non diabetic and non-hypertensive.

RESULTS

On physical examination, the pain intensity was rated at 8-9 on the Visual Analog Scale (VAS), with a severe disability of 83% measured using Fairbank's rating scale. The pain worsened with activities such as sitting, standing, walking, bending, and routine movements. Blood pressure was recorded at 124/86 mmHg and pulse rate at 82 beats per minute. The Straight Leg Raise Test (SLRT) was positive at 30 degrees on both legs, more severe on the right. The patient exhibited an antalgic gait and was unable to sit or walk properly due to the persistent nature of the pain.

Timeline

2023-06-01	Patient felt chronic low backache and tingling sensation
2023-06-02	MRI Spine conducted
2023-06-02	Gradual pain, becoming sharp, shooting, and burning, accompanied by numbness. Initially located near the right and left posterior sacroiliac joints, it radiated bilaterally to the buttocks, thighs, calf muscles, and ankles, with tingling sensations
2023-07-07	The patient took allopathic treatment including Ibuprofen 400mg 3 times daily and got merely symptomatic relief temporarily. He also consulted the physiotherapy for more than two months but had negligible improvement in the intensity of pain.
2023-07-31	Patient consulted at Ilaj-bit Tadbeer OPD of State Unani Medical College & Hospital, Prayagraj
2023-08-01	For relief of pain, Habb-e-Suranjan 2 tablets twice a day after meal was advised for 30 days. Arq Ajeeb was advised for local application in case of unbearable pain.
2023-08-01	Patient was treated with massage-led cupping (Hijama Mutaharrika) along with wax for 10 minutes over the paravertebral region of lumbar back (L2-L5) and along the course of sciatic nerve on alternate day over a period of one month (15 sitting in total).
2023-09-01	Patient was evaluated for symptoms.

Narrative

Diagnostic Assessment

Pain intensity assessed using the Visual Analog Scale (VAS), Fairbank's rating scale for disability, and the Straight Leg Raise Test (SLRT). Routine blood tests were conducted to rule out underlying conditions. An MRI scan of the lumbar spine was conducted prior to visit to our hospital. Following are the findings of MRI (Figure 1):

- **L5 Level:**
  Bilateral pars interarticularis defect at L5 level with mild (grade 1) L5 anterolisthesis (with respect to S1 vertebral body) along with L5-S1 disc desiccation with reduced disc height, vacuum phenomenon, irregular end plates & end plate signal changes.
  Apparent diffuse posterior disc bulge, ligamentum flavum hypertrophy and facetal degeneration at L5-S1 level with mild canal stenosis, narrowing of right lateral recess and bilateral intervertebral neural foramina indenting thecal sac

with compression of emerging bilateral L5 nerve roots.

- **L1-2 Level:**
  Mild posterior disc bulge at L1-2 level with mild canal stenosis & narrowing of left lateral recess.

- **L2-3 Level:**
  Mild posterior disc bulge with annulus tear at L2-3 level with mild canal stenosis & narrowing of bilateral lateral recess indenting thecal sac.

- **L3-4 Level:**
  Posterior disc bulge with annulus tear at L3-4 level causing mild canal stenosis, narrowing of bilateral lateral recess and intervertebral neural foramina indenting thecal sac and cauda equina nerve roots with compression of bilateral traversing L4 nerve roots also contributed by ligamentum flavum thickening.

- **L4-5 Level:**
  Diffuse posterior disc bulge at L4-5 level causing mild to moderate canal stenosis, narrowing of bilateral lateral recess and intervertebral neural foramina indenting thecal sac and cauda equina nerve roots with compression of bilateral traversing L5 nerve roots.

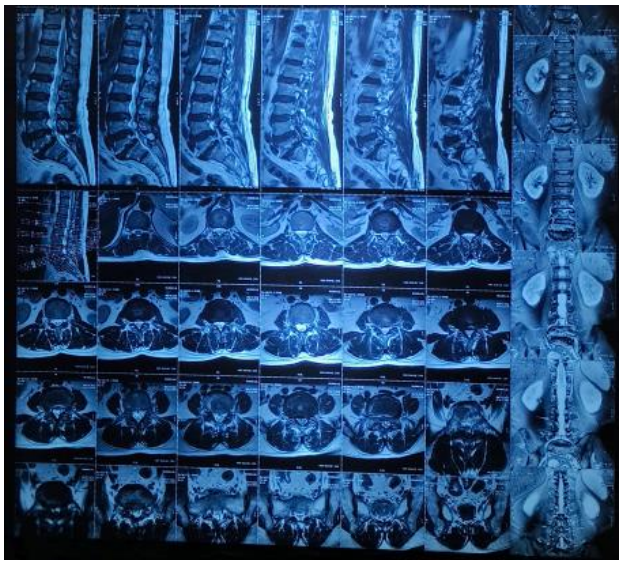

Figure 1. MRI of lumbosacral spine showing the degenerative changes in the lumbosacral spine

Diagnosis

The primary challenge was differentiating the patient's sciatica from other potential causes of bilateral leg pain, such as peripheral neuropathy or vascular insufficiency. The absence of trauma or significant medical history complicated the diagnosis. The patient was diagnosed with bilateral sciatica, most likely caused by lumbar spine issues such as herniated discs or spinal stenosis. Other potential diagnoses considered included peripheral neuropathy and vascular insufficiency, but these were ruled out based on the clinical findings and imaging results.

Prognostic Characteristics

Given the chronic nature of the patient's symptoms and the limited response to previous treatments, the prognosis was cautiously optimistic. While significant improvement was achievable with appropriate holistic and manipulative therapies, the persistent and severe nature of the pain indicated a need for ongoing management and potential adjustments in treatment strategies.

Therapeutic intervention

The patient received a combination of manipulative therapy and pharmacologic treatment. Massage-led cupping (Hijama Mutaharrika) combined with wax application was administered for 10 minutes over the paravertebral region of the lumbar back (L2-L5) and along the course of the sciatic nerve. This therapy was conducted on alternate days over a period of one month, totaling 15 sessions. Initially, medium-sized cups were used, followed by two large-sized cups over the sacroiliac joint bilaterally, two medium-sized cups on the mid-point of the hamstring muscles bilaterally (5 cm apart), and one medium-sized cup on the dorsum of both mid-calf muscles. The procedure included a gentle hand massage on the affected area, followed by massage cupping therapy. After 10 minutes, the cups were removed, the area was cleansed with cotton, and the patient was advised to rest for 10 minutes. Additionally, the pharmacologic treatment included Habb-e-Suranjan tablets, with a dosage of 2 tablets twice a day after meals for 30 days, and Arq Ajeeb for local application in case of unbearable pain.

Follow-up and outcomes

The outcomes were assessed both by the clinician and the patient. The patient reported a significant reduction in pain, with the severity decreasing to a score of 2 on the Visual Analog Scale (VAS). Functional improvement was noted, as the patient experienced better mobility and a reduction in disability, allowing improved performance of daily activities. No additional diagnostic tests were conducted post-treatment due to the marked improvement in symptoms. The patient adhered well to the prescribed therapy regimen, attending all 15 cupping sessions and taking the Habb-e-Suranjan tablets as instructed. The interventions were well-tolerated, with no reported issues in managing the procedures or medication intake. Furthermore, no adverse or unanticipated events were reported during or after the therapeutic interventions, and the patient did not experience any complications related to the cupping therapy or medication.

Patient Perspective

I was struggling with severe pain and tingling sensations that affected my daily life and work. Despite trying various medications and physiotherapy, I found little relief. When I started the Unani therapy, I was skeptical but hopeful. The treatment was thorough, and the process was well-explained. Over the course of a month, I experienced a significant reduction in pain and an improvement in my mobility. The pain that once dominated my life is now minimal, allowing me to return to my daily activities with greater ease.

DISCUSSION

Sciatica is a major health problem since ancient times. In Unani medicine, Irqunnasa clinically presents as low back pain associated with neurological infirmity which is caused by excess of *Burūdat* or accumulation of *Kham Balgham* in lower back. It is treated on the lines of *Imala* (diversion) and *Taqiya*-e-*Mavad* (evacuation of morbid humor).[15] Among the therapeutic approaches adopted in sciatica, *Hijama* (cupping therapy) is a centuries-old time-tested method to treat and improve the quality of life in patients of LBP.[16] In recent times, the newly conducted evidence-based research on the efficacy and safety of cupping therapy has attained a wider acceptance globally, especially in the scientific community.[16] Moreover, various clinical trials have reported the mechanistic efficacy in amelioration of lower back pain of neurologic origin.[17,18] Accumulation of morbid matter in the affected joints causes severe pain, stiffness, and tingling sensation radiating from lower back to legs leading to hampering in daily life activities. It might be aggravated due to excessive work or heavy weight lifting, and exercise. Generally, sciatica affects only one side of the leg but, in some cases, it may affect both the legs. This condition can worsen due to overweight, trauma, and heavy weight lifting during spine-flexed position etc.

The mechanism of action of cupping therapy is still unclear, though it has been found that it exerts analgesic effects on pain due to neural conditions.[16] Some scholars found that treatments don't work for reducing pain or improving quality of life.[19,20]

According to Melzack *et al*, nerve fibres for touch, pressure, and vibration send the pain signal from the site of injury to the brain through dorsal side of the spinal cord. When a stimulus such as cupping glass is applied onto the skin, activation of nociceptors stimulates *a* and *c* nerve fibers conveys the signal to the spino -cortical pain pathway.[21]

As many larger fibers remain inactive in the absence of stimulus change, the stimulation causes a disproportionate relative increment in the large nerve fiber compared to the small fiber. A gentle touch, like the initial placement of a cupping glass, activates mainly large fibers. These fibers not only transmit the touch sensation but also partially close the "pain gate," potentially reducing pain perception.

If the intensity of stimulus is constantly augmented, more sensory nerve fibers get activated and thus, the firing frequency is dramatically increased.[17] The resultant mixed effects produced by large and small nerve fibers neutralize each other resulting in the slower and progressive rise in T cell output. If stimulation is lasting for prolonged period, the large nerve fibers become adaptive, for relative increase in the small-fiber neuronal action. Hence, the gate further opens, and the output of the "T" cells rises more steeply. If the large-fiber activity is mechanistically increased at this time in form of vibration or scratching such as cupping glass, the output of the cells decreases resulting in the alleviation of pain by anti-nociceptive and counter irritation mechanisms.[22] It is stipulated that application of cupping glasses stimulates the nociceptors which increase the frequency of impulses leading to closure of the pain gates and, thus, pain reduction is ensued.[22] Similarly, Habb-e- Suranjan is a potent anti-rheumatic compound medication extensively used in Unani medicine for low back pain. The main phytochemical principles in Suranjan (*Colchicum luteum*) Baker are alkaloids, viz. colchicine, 2-desmethylcolchicine, -lumicolchicine, N-desacetyl N-formyl colchicine, and luteidine. Colchicine is the most important anti-inflammatory compound obtained from Suranjan (*Colchicum luteum*) Baker and its anti-inflammatory activity is attributed to the inhibition of microtubules in proinflammatory cells including macrophages. Thus, the reduction in sciatic pain may be, based on observations, attributed to the combined efficacy of gliding cupping and Habb-e-Suranjan.

CONCLUSION

This study demonstrates that Hijama Mutaharrika (Gliding cupping) is effective in managing Irqunnasa (sciatica), leading to considerable improvements in both the quality of life and disease progression for the patient. The therapy showed potential benefits by enhancing local skin blood flow, influencing skin temperature, increasing the local mechanical pain threshold, altering biochemical properties of the skin, and regulating immunity. Despite these promising results, further research with larger sample sizes is necessary to conclusively establish the effectiveness of Hijama Mutaharrika in sciatica management. Additionally, more studies are required to fully understand the underlying mechanisms of cupping therapy and its broader applications in pain management.

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CONFLICT OF INTEREST

The author has no conflicting financial interests.

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