



Role of Unani Medicine in the Management of *Irqunnasa* (Sciatica)

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ABSTRACT

Irqunnasa or *Sciatica* refers to the pain that radiates along the sciatic nerve. The sciatic nerve is formed by the combination of 5 nerves in the lumbar (lower) and sacral spine -L4, L5, S1, S2, and S3 region of spinal column and then go behind the buttocks and then deep down to the foot. These nerves are the largest nerves in the body which passes through both right and left leg. It is almost thick as the little finger. Mostly, the pain feels like sudden strong pain like that of electricity shock. *Irqunnasa* occurs due to any irritation like compression or injury in the sciatic nerve root. *Irqunnasa* is typically caused by common conditions including herniated disc, degenerative disc diseases and lumbar spinal stenosis. Neurologic pains of lower limb are one of the common manifestations of *Irqunnasa*. Its lifetime incidence varying from 13% to 40%. It is most common in people's 40s and 50s. The corresponding annual incidence of an episode of sciatica ranges from 1% to 5%. In Unani system of medicine *Irqunnasa* is classified under *Waja-ul-Mafasil* (Joint Disorders). *Ibn Sina* (Avicenna) explained that *Irqunnasa* is caused by the accumulation of nerve fluid; mainly *Khilt-e-balgam* and *Khilt-e-safra* in the *Asab-e-ariza* (Sciatic nerve). The treatment is the evacuation of the morbid matters present in sciatic nerve by various ways like *Ilaj-bil-dawa* along with *Ilaj-bil-ghiza* and *Ilaj-bit-tadbeer* techniques like *Hijama* (Cupping), *Zimad* (Paste), *Fasd* (Venesection), *Nutool* (Irrigation), *Dalak* (Massage), *Riyazat* (Exercise), and *Ishaal* (Purgation).

1. INTRODUCTION

Irqunnasa is a disease of Peripheral Nervous System (PNS). It is usually defined as the pain from the back, radiating to the buttocks and down the leg as far as the knee, ankle or foot. Lumbar Osteoarthritis which is called Lumbar Spondylosis is one of the common causes of *Irqunnasa*. The pain is usually a shooting type, like electricity. It can also have a feeling of burn like fire. *Irqunnasa* occurs due to any irritation or compression in the sciatic nerve root. The *Asab-e-ariza* (Sciatic nerve) is a combination of 5 nerves in Lumbar and Sacral spine - L4, L5, S1, S2, and S3. It is almost thick as a little finger. *Irqunnasa* is most common in men than in women. The Hamstring muscles, Hip Abductor and all muscles below knee are the usual sights of lesion near to the sciatic notch. Clinical features are pain and numbness of sole, weak toe flexures. Mostly physical examination is the

main method of diagnosing *Irqunnasa*.

Ibn Sina (Avicenna) described the pain of *Irqunnasa* as arising from the hip joint and radiating through the back of thigh up to ankle joint is due to accumulation of nerve fluid. The descent of pain in the leg correlates the duration of disease. The affected thigh becomes thin. The patient feels comfort on pressing the leg and walking on the toes. Sometimes, the symptoms are increased while walking which is known as neurogenic claudication.

According to *Ibn sina*, the principle of treatment is:

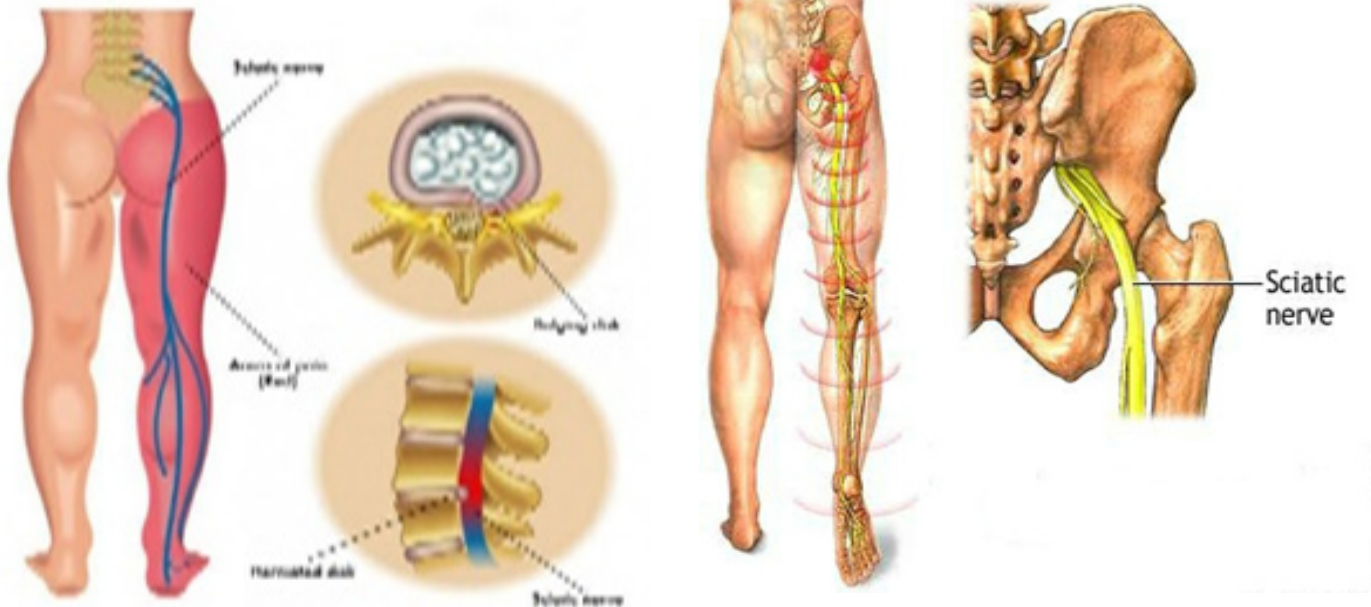
- i) *Ilaj-bit-tadbeer wa taghzia* (Regimental and dieto therapy)
- ii) *Ilaj-bil-dawa* (Pharmacotherapy)
- iii) *Ilaj-bil-yad* (Surgery)

Allama Nafees defined *Dalak* (Massage) as treatment. *Dalak* is a type of exercise because it liquefies the waste products, produces heat in the body and makes the muscle hard and strong. Another commonly and effectively used method of treatment is *Hijama* (Cupping)

History and Etymology

Buqrat (Hippocrates 460 – 377 BC), father of medicine was

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the first physician to use the term Sciatica from the Greek word Ischium which means hip. In French, hip is known as Sciatique. In *Kithabul havi*, Rhazes describes about *Irqunnasa*. According to him, this disease mostly occurs due to variation of *Akhlata* (Humours) and mentioned many treatments. In the *Qanoon Fi Tib* (The Canon Of Medicine), *Ibn Sina* (Avicenna 980 – 1037 AD) noted that the *Irqunnasa* is more painful and severe than that of arthritis and usually relieved by *Aml-e-Kai* (Cauterization). Earnest Charles Lasegue (1816 – 1883) described Lasegue's sign; which is an important diagnostic feature in sciatica. The term *Irqunnasa* is; *Arq* which means vessel and *Nasa* which means women. Even though, the disease is caused mainly in men, the name is coined as *Irqunnasa* because in pregnant women this disease is seen frequently. It is because of compression of *Asab-e-ariza* (sciatic nerve).

Definition

Irqunnasa refers to the pain that radiates along the sciatic nerve and is typically felt in the buttocks, down to the back of leg and possibly to the foot. The syndrome is now accepted as being caused by Lumbar disk prolapse. *Ibn Sina* defined *Irqunnasa* as the pain arising from the hip joint and radiating through the back of thigh up to ankle joint is due the accumulation of nerve fluid in *Asab-e-ariza*.

Types

- i) Neurogenic: The pain caused by compression of the sciatic nerve of smaller nerve roots.
- ii) Referred: The pain due to a muscle and joint problem in the spine and pelvis.

Causes and Etiology

Modern Aspect

Sciatica can be caused by several conditions that involve your spine and can affect the nerves running along your back. It can also be caused by an injury, for example from falling, or spinal or sciatic nerve tumours.

Sciatica is caused by injury to or compression of the sciatic nerve. The most common injuries that cause sciatica are:

1. Diabetes
2. Spinal stenosis
3. Piriformis syndrome
4. Herniated disk
5. Prolonged external pressure on the nerve
6. Pressure on the nerve from nearby body structures
7. Pressure on the nerve where it passes through a narrow structure
8. True sciatic neuritis (leprosy, polyarthritis nodosa, nerve injury due to injections or trauma, post-hepatic neuralgia)
9. Tumor or abscess
10. Fractures of the pelvis or other trauma to the buttocks or thigh.
11. Bleeding in the pelvis.

Unani Aspect

According to Unani concept, the pathological changes in the joints are caused mainly by derangement of temperament of humors, which leads to accumulation of *Mawad-e-Fasida* (Morbid matter) in the joint spaces. The rearrangement of temperament of humors may be simple, *Waja-ul-Mafasil Sada*, causing only functional disturbance of articular surfaces, and is of short duration or it may be compound as *Waja-ul-Mafasil Maddi*³ in which organic disturbance and quantitative changes take place in the joints.

1. According to *Ibnu Sina*, "*Waja-ul-Mafasil* is the pain of joints which includes *Niqras* (Gout), *Irqunnasa* (Sciatica) and other types of joint pains.

2. According to *Zakariya Razi*, *Waja-ul-Mafasil* is one of those disorders which occur in the form of recurrent or paroxysmal attacks. *Razi* defines it as *Waja-ul-Mafasil* is a wide term that encompasses pain of joints, *Niqras* (Gout) and *Irqunnasa*. When, the pain starts from hip and spreads down the length of leg then it is called as *Irqunnasa*, and

when it is in foot, it is named as *Niqras*. He further adds that this disease is caused by the accumulation of *Rutubat* (excessive fluid).

3. According to *Dawood Antaki*, most of the physicians call it *Marz-ul-Malook*. Depending upon the joints involved *Waja-ul-Mafasil* is named accordingly as *Niqras* (Gout), *Waja-ul-Warik* (Ischial pain), *Irqunnasa* (Sciatica), *Waja-ur-Rukbah* (Knee pain). Sometimes it also involves the jaws, ear ossicles and vertebrae and become complicated to be diagnosed.

4. Sciatic pain can also be caused by coughing, sneezing, straining or pressure on the jugular vein, sometime by movement of head, trunk, or legs.

5. Thus according to unani concept sciatica is caused by injury to the nerve, pressure on nerve due to any external factors, any growth inside the pelvic cavity like *sartan raham* (Uterine cancer), due to chronic constipation, due to inflammation in lumbar spine, strong exercise, *Fasade Khoon* (Impurities in blood) - Gout/Toxin/Syphilis.

Risk Factors

Certain behaviors or factors can raise your risk of developing sciatica. The most common factors for developing sciatica include the following:

Age

As your body ages, it becomes more likely that parts will wear out or break down.

Occupation

Certain occupations place a lot of strain on your back, especially those that involve lifting heavy objects, sitting for extended periods, or twisting movements. Certain drivers tend to have chances of sciatica due to thick wallet placed in the back pocket.

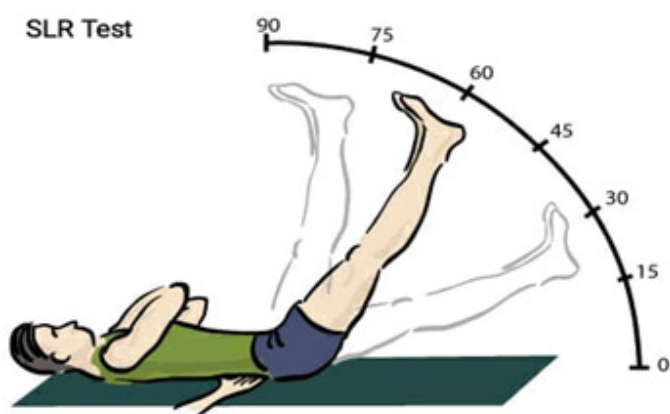
Diabetes Having diabetes can increase your risk of nerve damage.

Obesity Obesity can cause nerve compression.

Habit Smoking can cause the outer layer of your spinal disks to break down.

Signs and Symptoms

Signs



SLR (Straight Leg Raising) Test

The leg is raised between 30 and 70 degree until radicular pain radiating down the leg is evoked, then only the test is considered positive

• Laseague's Sign

The knee and hip joint are flexed to about 90 degree and then the leg is extended at the knee joint, with such extensions, the patient experiences pain in the thigh along the course of the sciatic nerve. At this stage one can passively dorsiflex the foot or even the great toe, which is followed by further aggravation of pain.

• Browstring Sign

Also known as the popliteal compression test or posterior tibial nerve stretch sign. This sign is an important indication of root tension or irritation. The examiner carries out SLR to the point at which the patient experiences some discomfort in the distribution of the sciatic nerve. At this level the knee



is allowed to flex and the patient's foot is allowed to rest on the examiners shoulder. The test demands sudden firm pressure applied to the popliteal nerve in the popliteal fossa.

D.T.R (Deep Tendon Reflexes)

In case of spinal cord compression, there will be brisk DTR. In Lower Motor Nueron compression, DTR will be diminished.

Symptoms

Common symptoms of sciatica include

1. Pain from the lower back of the Leg
2. The pain is worse when sitting or standing, but better when lying down.
3. Weakness in Foot or Leg
4. Difficulty in walking
5. Inability to bend the knee
6. Inability to move the foot
7. Muscle spasm and rigidity
8. Pain or numbness deep within one of buttocks.
9. Burning or tingling in the legs rather than a dull ache.
10. Weakness, numbness, or difficulty moving the leg or foot

11. A constant pain on one side of the rear
12. A shooting pain that makes it difficult to stand up

Diagnosis of a Case

1. Medical history

A medical history includes an inquiry into the patient's medical history, past surgical history, family medical history, social history, allergies, traumatic history and medications the patient is taking or may have recently stopped taking.

2. Physical examination

a. Lumbar spine

- Stand behind the patient and assess the straightness of the spine, muscle bulk and symmetry in the legs and trunk
- Look for asymmetry at the level of iliac crest (unilateral leg shortening) and swelling or other abnormality of gluteal, hamstring, popliteal and calf muscle
- Stand beside the patient and ask him to bend down and try to touch his toe, this highlights any abnormal spinal curvature or limited hip extension.
- Stand behind the patient, hold the patient's pelvis and ask him to turn from side to side without moving his feet, this tests thoracolumbar rotation.
- Ask him to slide the hand down lateral aspect of the leg toward the knee this is done for lateral lumbar flexion.

b. Special signs

I. Positive SLR Test

II. The Tenderness of nerves are examined

III. Intensification of pain in back and leg during rotation is noted.

IV. Popliteal compression

V. Testing of the sacroiliac joints: Ask the patient to lie in prone position. The physician examines by putting one hand on top of the other over the patients coccyx and pushes down, looking for motion in the joint.

VI. Estimation of range and painlessness or otherwise of hip joint by passive stretching.

VII. Muscle power in the lower limb tested against resistance.

VIII. Knee and ankle jerks.

IX. Presence of tender nodules

3. Investigations

a) Laboratory investigation:

- Blood count: ESR – to check infection/myeloma, serum protein, calcium phosphate, uric acid, alkaline phosphate,

acid phosphate.

b) Radiological finding:

Bony changes are seen narrowing of disc space which may cause sciatica.

c) CT Scan:

Narrowing of canal Lesion of vertebral bodies and posterior elements Paravertebral soft tissue masses.

• Myelogram:

Lumbar disc herniation and prolapsed lesion or fissuring of annulus⁴ cyst on sacral nerve root is seen.

d) MRI: Disc prolapse Narrowing of the canal

e) X-ray

f) Magnetic resonance neurography

g) Abdomino- pelvic USG to rule out any abdominal/ pelvic cause

h) Electro myography and nerve conduction studies

i) Urine routine to rule out the renal causes

j) ESR to rule out the infections; Differential Leucocyte Count (DLC) in peripheral blood.

Deferential Diagnosis:

- 1) Lumbar spondylosis
- 2) Sacroilitis
- 3) Ankylosing spondylitis
- 4) Spondyloarthropathy
- 5) Disc lesion (Lumbago)
- 6) Intermittent claudication
- 7) Arthritis of the hip
- 8) Spondylolisthesis
- 9) Major lesion in the buttocks
- 10) Tumors
- 11) Renal calculus

Complications

- 1) Recurrent or unnoticed injury to the leg
- 2) Loss of feeling or weakness in affected leg
- 3) Loss of bladder or bowel functions
- 4) Partial or complete loss of leg movement or sensation
- 5) Slipped or herniated disc

- 6) Side effects of medications
- 7) Psychological problems
- 8) Permanent nerve damage may occur

Management

Modern Management:

i. Medication

Pain killers and anti-inflammatory such as acetaminophen, aspirin, or NSAIDs (such as ibuprofen [Advil, Motrin], ketoprofen, or naproxen [Aleve]). Prescription may include muscle relaxants to ease muscle spasms.

ii. Traction

Spinal traction is a form of decompression therapy that relieves pressure on the spine. It can be performed manually or mechanically. Traction can be applied either to leg or to hip depending on condition. It helps to relieve the sciatica.

iii. Manipulative therapies:

It is done to manage the musculoskeletal pain and diseases. It includes kneading and manipulation of muscles, joint mobilization and joint manipulation

iv. Epidural injections

Epidural steroid injection is a technique in which corticosteroids and a local anesthetic are injected into the epidural space around the spinal cord in management of sciatica.

iv. Physiotherapy

As sciatica occurs mainly due to pressure on the sciatic nerve, physiotherapy involves removing this pressure.

vi. Surgery

Micro discectomy or laminectomy are the common surgical approach used to treat sciatica. In this surgery, a small part of the disc material under the nerve root or bone over the nerve root is taken out.

vii. Rest

Bed rest for a minimum period of 1 to 4 week is essential.

viii. Life style changes

Avoid lumbar flexion, riding two wheelers, sitting without back support, sleeping over uneven surface. Use lumbar belt.

Unani Treatment

1) USOOL-E-ILAJ (line of treatment)

a) Treating the root cause

- *Ta'deel-e-mizaj* (Correction of dearranged temperament)
- *Tanqiya-e-madda* or *Istefra-e-madda* (Evacuation of morbid material) via *Fasd* (Vensection), *Hijamah* (Cupping), *Munzij wa mushil* therapy (Concoction and Purgative) for it evacuation followed by *Mubarridat* (Refrigerants) for normalizing the excess heat produced by *Muhsilat*, *Mo'ariqat* (Diaphoretics), *Muddirat* (Diuretics) and *Muqqiat* (Emetics).

b) To relieve symptoms and signs:

- Analgesics: oral as well a local use of analgesic and sedative drugs
- Anti-inflammatory drugs

c) Strengthening of *Quwa-e-mudabbira-e-badan* (Supreme planar of the body)

d) *Muharriq wa Muqawwi-e-asaab* (Nerve stimulant and Nerve tonic)

2) ILAJ BIL DAWA

a) MUFRADAT (Single Drugs)

i) *Taskeene dard* (Analgesic)

- *Ekleelul Mulk* (*Trigonella uncata*)
- *Chobchini* (*Smilax china*)
- *Suranjan* (*Colchicum luteum*)
- *Kulanjan* (*Alpinea Galanga*)
- *Zanjabeel* (*Zingiber Officinalis*)

ii) *Muhallil-e-awraam* (Anti-inflammatory)

- *Aspand* (*Peganum hemala*)
- *Muqil* (*Commiphora mukul*)
- *Ersa* (*Iris eusata*)
- *Kuchla* (*Strychnous nuxvomica*)

iii) *Munzij-e-balgam* (Concoctive phlegm)

- *Beekh Kasni* (*Cichorium intybus*)
- *Beekh Badiyan* (*Foeniculum vulgare*)
- *Beekh Karafs* (*Apium graveolans*)
- *Aslossoos* (*Glycirrhiza glabra*)
- *Anjeer* (*Ficus caricus*)
- *Pershioshan* (*Adiantum capillus veneris*)

iv) *Mushil-e-balgam* (Purgative phlegm)

- *Turbud* (*Ipomea turpentum*)
- *Sana Makki* (*Sanna alexandrina*)
- *Ustukhudoos* (*Lavamdula Stoechus*)
- *Habbuneel* (*Ipomea nil*)
- *Khayar Shambar* (*Cassia fistula*)

v) *Mubarridat* (Refrigerant)

- *Shire Tukhme Kahu* (*Lactusa sativa*)
- *Shire Tukhme Kaddu* (*Cucurbita maxima*)

- Shire Tukhme Kasni (*Cichorium intybus*)
- Shire Tukhme Khayarain (*Cucumis sativus*)
- Gule Surkh (*Rosa rubiginosa*)

vi) Musaffi Khoon (Blood purifier)

- Ushba (*Smilax ornate*)
- Aftimoon (*Cuscuta reflexa*)
- Darchini (*Cinnamomum zilanicum*)
- Sandal safed (*Sandalum album*)
- Shahitra (*Fumeria officinalis*)
- Chiraita (*Swertia chiraita*)

b) MURAKKABATH (Compound Drugs)

- Safoof Suranjan
- Habbe Suranjan
- Habbe Sibr
- Habbe Shabyar
- Habbe Ayarij
- Habbe Sheetraj
- Habbe Azaraqi
- Habbe Asgand
- Habbe Irqunnasa
- Jawarish Zarooni
- Majoon Ushba
- Majoon Chobchini
- Majoon Falasfa

c) NUSKHAJAT (Formulations)

i) Taskeene Dard

- Gule Baboona – 35g
- Akleelul Mulk – 35
- Marzanjosh – 35g
- Barg Kaar – 35g
- Tukhme Harmal – 120g

* Make powder of all the above drugs.

* Mix with *Muqil* and apply as a paste with luke warm water.

ii) Munzij-e-balgam

- Beekh Kasni – 7g
- Beekh Badiyan – 7g
- Beekh Izkhar – 7g
- Beekh Karafs – 7g
- Pershioshan – 7g
- Ustukhuddos – 7g
- Asloosooos Muqashar – 5g
- Maweez Munaqqa – 9 No

* Soak all the drugs overnight and make *Joshanda* (decoction)

* Mix with *Gulqand Asli* (50g) and can be used as *munzij-e-balgam*.

* After getting the perfect result of *Munzij-e-balgam*, *mushil-e-balgam* can be given.

iv) Mushil-e-balgam:

- Turbud Mujawwaf – 5g
- Gariqoon Mugarbal – 2g
- Sana Makki – 12g

- Maghz Khayar Shambar – 85g

* Mix all the drugs with *nuskhae munzij e balgam* and add *Roghan Bedanjeer* (12ml).

* After getting perfect result of this *nuskha*, give *nuskhae tabreed*.

v) Tabreed:

- Gulqand Aftabi – 5g
- Arq Badiyan – 150ml
- Tukhme Raihan – 4g

* Mix all the drugs and drink it as *tabreed*.

vi) Musaffi Khoon :

- Ushba Magribi – 25g
- Aftimoon – 25g
- Darcheeni – 25g
- Gauzaban – 25g
- Chobcheeni – 12g
- Gule Surkh – 12g
- Sandal Safed – 12g
- Halela Siyah – 7g
- Poste Zardh – 6g

* Make a *qiwam* in the consistency of *Majoon* with 750g of Sugar and 500ml of Honey.

* Make fine powder of all the above drugs and mix with *qiwam* and prepare *majoon*.

* Take 12g of the *Majoon* Along with 75ml of *Arq Ushba* and drink it.

vii) Safoof Majoosi:

Ali Ibn Abbas Majoosi in his book *Qamilu Sana'a Tibiyya* (Encyclopedia of Medicine) said this *nuskha* is best for *Sciatica*.

- Sana Makki – 3 Tola
- Suranjan – 1 Tola
- Sheetraj Hindi – 10 Masha
- Zafran – 2 Masha

* Make powder of all the drugs and mix with 7 Masha to 10 Masha of Sugar and drink with luke warm water.

Advice

According to *Bayaze Kabir* (written by *Allama Muhammed Kabeeruddin*):

- Avoid exposure to cold
- Take proper rest
- Avoid physical activities such as hard exercise, weight lifting, long walk or run.
- Maintain temperature of foot. Frequently, apply hot *Roghaniyat* (Oils)
- Avoid sitting in moisture surface.

Diet

- Avoid/Stop Alcohol intake and Smoking.

- Frequently take Herbal Tea (*Ashjoo*).
- Take Bone Marrow soup/ Broth (*Shoorba*).
- Avoid: Fish, Milk and Milk Products, Spicy and Citrus foods, etc..

3) ILAJ BIT TADBEER

• *Zakariya Razi* stated in his book *Al-Hawi*, under the treatment of *Irqunnasa* (Sciatica), and *Waja-ul Mafasil* (Arthritis) - In case of *Irqunnasa*, enema is more useful than purgation, but if thick humors are collected in hip joint then *Hijamat* becomes mandatory and has a big advantage over other methods.

• In *Kaamil-us-Sana'a*, pertaining to the treatment of *Irqunnasa* it is written, - When the disease becomes chronic and there is no relief in using the drug treatment, then it is essential to use *Hijamat-e-Nariya* (fire cupping) as it sucks the material from the joints towards the skin.

• *Ibne Sina* writes under the treatment of *Irqunnasa* that if the drug treatment is unable to treat the problem then *Hijamat* (cupping) with and without scarification over the hip will be helpful.

• In the management of *Irqunnasa*, *Azamkhan* quotes - lastly those *Tadabeer* (measures) should be carried out which have *Muhallil* (Anti-inflammatory) and *Mulattif* (Demulcent) effects and take out the deep seated materials to the body surface. *Hijamat* (Cupping), *Muhammir* (rubificent) paste and the *Tila* of garlic, onion, *Nargis*, *Baladur* and Fig are included in these *Tadabeer*, but along with these, some laxative drugs should also be added otherwise there may be dryness in the joints.

• According to the eminent Unani physicians the following procedures and techniques also helpful in the management of the sciatica such as *Nutool* (pouring of decoction of drugs), *Bukhoor* (Vaporization), *Aabzan* (sitz bath) and *Riyazat* (exercises).

CONCLUSION

It is crystal clear that the various classical unani books have mentioned the concept, etiology, clinical features, diagnosis and treatment of *Irqunnasa* in an elaborated manner. Also the effective manner of the utilization of unani treatment modalities (*Ilaj-bil-ghiza along with Ilaj-bit-tadbeer, Ilaj-bil-dawa*) could be found in the various treaties of unani eminent physicians. As supporting to the famous quotation that "Prevention is better than cure", the unani medical system also have a number of preventive measures for controlling even before the onset.

Hence, it is concluded that *Irqunnasa* can be treated in an effective and safe manner in the unani system of medicine.

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