

Study of Efficacy of *Dalak* (Massage) with *Roghan-e-Surkh* in Cases of *Irqunnisa* (Sciatica)

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Irqunnisa is the disease in which pain arises from lower back and radiates to the leg. It is known as sciatica in modern medicine. The pain radiates in the lower limb due to irritation of the nerve roots of sciatic nerve. Patients may also report sensory symptoms. Lumbar spine osteoarthritis is one of the most common causes of sciatica. In Unani system of medicine the management of *irqunnisa* (sciatica) includes use of Unani drugs and massage of Unani medicinal oils. *Roghan-e-Surkh* is Unani medicinal oil which contains various drugs. It is beneficial for the treatment of arthritis, sciatica, gout and paralysis etc.

Present study was conducted in MIJ Tibbia Unani Medical College, Mumbai in the year 2007. Nine patients suffering from sciatica due to lumbar spine osteoarthritis were selected. Their clinical examinations were conducted to diagnose the sciatica. The X-ray of the lumbar spine was also taken to confirm the diagnosis of osteoarthritis of lumbar spines. Massage with *Roghan-e-Surkh* on the lower back and affected lower limb for 8-10 minutes daily for 14 days caused a significant reduction in the symptoms and signs of sciatica after the completion of study.

Keywords: *Irqunnisa* (Sciatica), *Dalak* (Massage), *Roghan-e-Surkh*.

Introduction

Sciatica is among the most common musculo skeletal disorders with an estimated prevalence of around 5%. Sciatica is usually defined as pain from the back radiating to the buttocks and down the leg as far as the knee, ankle or foot¹. Lumbar Osteoarthritis which is also called lumbar spondylosis is one of the most common causes of sciatica. Bad posture and chronic back strain are the common causes of lumber

spondylosis. There is pain in lower back. The pain may radiate in the lower limb due to the irritation of the nerve roots which is called sciatica². Spinal canal stenosis may develop due to the formation of osteophytes giving rise to radiating pain in the lower limb. Sometimes symptoms are aggravated by walking which is known as neurological claudication³.

Ibn Sina described sciatica as pain of *Irqunnisa* arising from the hip joint and radiates through the back of the thigh upto the ankle joint. The descent of pain in the leg correlates with the duration of the disease. The affected thigh becomes thin. Patient feels comfort by pressing the leg and walking on the toes⁴.

Sciatica is mainly diagnosed by taking history and physical examination. By definition patients mention radiating pain in the leg. They may be asked to report the distribution of the pain and whether it radiates below the knee and drawings may be used to evaluate the distribution. Sciatica is characterised by radiating pain that follows a dermatomal pattern along with sensory symptoms. Physical examination largely depends on neurological testing. The most applied investigation is the straight leg raising test or Lasègue's sign⁵. Patient, lying in supine position, is asked to raise his legs without bending the knee joints. He is told to report as soon as he feels the pain and the location of pain. Then gently dorsiflex the ankle, it applies further pressure on the nerve root that aggravates pain⁶. Examination of lumbar spine reveals limited movements of spine and muscle spasm due to the pain.² When sciatica is caused by lumbar spine osteoarthritis, the radiograph of lumbar spines shows joint space narrowing due to articular cartilage loss. Other features such as bone sclerosis, subchondral cysts, and osteophytosis are evident on radiograph. A change in the contour of the joint, because of bony remodelling and subluxation may be seen⁷.

Allama Nafees defined "*Dalak* a type of exercise because it liquefies the waste products, produces heat in the body and makes the muscles hard and strong"⁸.

Unani physicians described the types of *Dalak* (massage) according to pressure (*Dalak-e-Sulb*, *Dalak-e-Layyan*, *Dalak-e-Mutadil*), duration (*Dalak-e-Kaseer*, *Dalak-e-Qaleel*, *Dalak-e-Mutadil*)⁸⁻⁹ and speed (*Dalak-e-Saree*, *Dalak-e-Batee*, *Dalak-e-Mutadil*)⁹. After combination of these 9 elementary types, 27 compound types are formed⁹. There are some other types of *Dalak* such as *Dalak-e-Khashin*, *Dalak-e-Amlas*, *Dalak-e-Istedaad*, *Dalak-e-Isterdaad*⁸.

Massage relieves pain¹⁰⁻¹², produces heat¹³⁻¹⁴ helps in excretion of toxins¹⁵⁻¹⁶, excretes baridmadda (cold matter)⁸, reduces swelling^{10, 17} and relaxes muscles^{11, 15, 17}. In Unani system of medicine the *Dalak* (massage) is done with different medicated oils in different diseases such as *fali*

(hemiplegia)¹⁸, *laqwa* (facial paralysis)¹⁹, *wajaumafasil* (arthritis)²⁰⁻²³, *Irqunnisa* (sciatica)¹⁹, *wajalasab* (neuralgia)²⁴, *suda* (headache)²⁵ etc.

Roghan-e-Surkh is Unani medicinal oil indicated for the treatment of *Wajaulmafasil* (arthritis), *irqunnisa* (sciatica), *nigras* (Gout), *wajauzzohar* (backache), *fali* (paralysis), *laqwa* (facial paralysis), *zarba* (trauma) and *worm* (swelling). It contains various ingredients such as *Ushna*, *Sandal Surkh*, *Habbul Ghurab*, *Dar-e-hald*, *Kaiphali*, *Narakchur*, *Haldi*, *Akh*, *Lehsun*, *Roghan-e-Sarsoon*, *Roghan-e-Rai*, *Roghan-e-darchini*, *Roghan-e-Laung* and *Roghan-e-Kunjad*²⁶. Most of its ingredients have *harmizaj* except *Sandal Surkh* and *Dar-e-hald*. *Ushna*, *Habbul Ghurab*, *Lehsun* and *Haldi* have *muhallil* (anti-inflammatory) properties. *Sandal Surkh*, *Dar-e-hald*, *Akh*, *Roghan-e-Sarsoon* and *Roghan-e-Laung* have *musakkin* (analgesic) effects. *Dar-e-hald*, *Akh* and *Roghan-e-Rai* have both analgesic and anti-inflammatory properties²⁷⁻²⁸.

Materials and Methods

The present study was conducted at Dr. MIJ Tibbia Unani Medical College, Mumbai in the year 2007. Nine patients suffering from sciatica due to lumbar spine osteoarthritis were selected. Patients of both sex and of age between 40-80 years were included in this study after their written consents. The clinical examinations were done to diagnose the sciatica. X-ray of the lumbar spine was also taken to confirm the diagnosis of osteoarthritis of lumbar spines. The patients were massaged with *Roghan-e-Surkh* on the lowerback and affected lower limb for 8-10 minutes daily for 14 days. *Roghan-e-Surkh* manufactured by Hamdard (wakf). Massage was done with moderate pressure, speed and for moderate duration (*Dalak-e-Mutadil*) on the lower back and affected area of lower limb.

Parameters of the Study

- 1) Radiating pain in affected limb
- 2) Numbness in the affected limb
- 3) Pain in lower back
- 4) Tenderness in lower back
- 5) Morning stiffness in lower back
- 6) Straight leg raising test

All the 6 parameters were given 0-3 score as per the severity (0 for absent/normal and 3 for severest form of respective parameter).

Straight leg raising test was also given 0-3 score (0 score for leg raising over 90°, 0.5 for 71-90°, 1 for 51-70°, 2 for 31-50° and 3 score for leg raising upto 30°).

All the parameters were observed before the treatment (baseline) and at the end of 1st week (Ist FU), 2nd week (IInd FU). The scores were compared before and after treatment and analysed by paired 't' test.

Observation and Results

Table 1 depicts the distribution of patients according to age. Most of the patients, 4 (44.44%), were in the age group of 41-50. Two (22.22%) patients were in the age group of 51-60, and other two (22.22%) were in the age group of 71-80 however, one (11.11%) was in the age group of 61-70.

TABLE 1
Distribution of Patients According To Age

Age Group	Frequency	Percent
41-50 Years	4	44.44
51-60 Years	2	22.22
61-70 Years	1	11.11
71-80 Years	2	22.22
Total	9	100.00

Table 2 show the distribution of patients according to sex. 4 (44.44%) were males and 5 (55.56%) were females.

TABLE 2
Distribution of Patients According To Sex

Gender	Frequency	Percent
Male	4	44.44
Female	5	55.56
Total	9	100.00

Table 3 describes the changes in parameter after completion of this study. The mean scores for various parameters before and after treatment for radiating pain (2.33 vs 0.94), numbness (2.22 vs 0.78), lower back pain (2.27 vs 0.43), tenderness (1.0 vs 0.50), morning stiffness in lower back (1.39 vs 0.78) and SLR (1.25 vs 0.75) showed significant reduction in pain which was evident at the completion of the study.

TABLE 3
Changes in Parameters

Parameters	Base Line Mean (±S.E.M.)	II FUMean (±S.E.M.)	t Value
Radiating pain	2.33±0.24	0.94±0.18	8.57*
Numbness	2.22±0.22	0.78±0.22	8.22*
Pain in lower back	2.33±0.17	0.50 ±0.11	11.26*
Tenderness	1.00±0.23	0.50 ±0.17	3.00**
Morning Stiffness	1.39±0.30	0.78±0.20	4.40**
SLR Test	1.16 ±0.22	0.67±0.09	3.46**

*p<0.0001, **p<0.01

Discussion

Reduction in the severity of symptoms and signs of sciatica were evident after completion of the study. Table 3 clearly show the changes in parameter after completion of the study. The mean score of radiating pain was 2.33 before the treatment and 0.94 after the treatment. The mean of numbness was 2.22 before the treatment and 0.78 after the treatment. Mean score of pain in the lower back was 2.33 before the treatment and 0.50 after the treatment. Mean score of tenderness was 1.00 before the treatment and 0.50 after the treatment. Mean score of morning stiffness in the lower back was 1.39 before the treatment and 0.78 after the treatment. The mean score of SLR was 1.16 before the treatment and after the treatment it was 0.67. After analysing the before and after treatment mean scores of each parameter by paired 't' test

the p value was found <0.01 suggesting significant reduction in all the parameters. This may be due to effect of massage along with *Roghan-e-Surkh*. Massage relieves pain, reduces swelling and relaxes the muscles. *Roghan-e-Surkh* has analgesic and anti-inflammatory drugs which enhances the benefits of massage in cases of *Irqunnisa*. No local side effects such as local reaction, itching etc. were observed during the study.

Conclusion

It is evident that the massage of *Roghan-e-Surkh* is effective in the cases of *irqunnisa* (sciatica). Significant reduction in severity of symptoms and signs of sciatica were prominent after completion of the study. No local side effects such as local reaction, itching etc. were observed during the study. Thus it is concluded that the massage with *Roghan-e-Surkh* is effective and safe therapy for the management of *irqunnisa* (sciatica).

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