

STUDY OF EFFICACY OF UNANI DALAK (MASSAGE) IN THE TREATMENT OF OSTEOARTHRITIS (WITH AND WITHOUT ROGHAN-E-SURKH – MEDICATED OIL)

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ABSTRACT

Massage is one of the most ancient therapeutic modality used to alleviate pain and reduce fatigue. In Unani system of medicine it is known as DALAK. The eminent Unani scholars described various types of massage in their text book. They also wrote the therapeutic importance of massage for the treatment of various diseases such as arthritis, sciatica, hemiplegia and facial paralysis etc. In Unani system of medicine different types of medicated oils are also used with the massage. The study of efficacy of Dalak (massage) in Osteoarthritis (with and without Roghan-e-Surkh) was conducted in Centre for Unani Ilaj –Bit –Tadbeer Regimental Therapy, a unit of Niamath Science Academy, Puduvoyal village, 40 km from Chennai, a project funded by Ministry of AYUSH, Govt. of India, 60 patients of osteoarthritis were randomly selected and divided in to two groups, 30 in Group A (control group) and 30 in Group B (test group). The patients of Group A were massaged with Roghan-esurkh and patients of Group B were massaged without Roghan-e-Surkh. Vegetable oil (sesame oil) was used for the lubrication in Group B. After the completion of treatment significant reduction of symptoms was found in both the groups. It was observed that Massage with Roghan-e-Surkh is more effective than without it because Roghan-e-Surkh contains various ingredients which have analgesic and anti-inflammatory properties. Massage is also effective without Roghan-e-Surkh because it reduces pain, produces heat, excretes baridmadda (cold matter), relaxes muscles and reduces swelling.

KEYWORDS: *Massage, Dalak, Osteoadhritis, Roghan-e-Surkh*

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INTRODUCTION

Unani System of Medicine was originated in 460 B.C. by Hippocrates in Greece – Unan. In one of the Therapy of Unani System of Medicine is Regimental Therapy – Ilaj Bit Tadbeer. The following Unani Therapies are:

Venesection, Cupping, Diuresis, Massage, Counter Irritant, Cauterization, Purging, Vomiting, Exercise, Sweating, Turkish Bath, and Leech Therapy.

Massage is defined as the therapeutic manipulation of soft tissues of the body to alleviate pain and reduce fatigue (Harrison,1986). In Unani system of medicine it is called Dalak. Nafees (1934) defined the Dalak as a substitute of exercise because it provides the passive movement to the body. Majoosi (1889) described following 9 elementary types of Dalak.

According to pressure

- Dalak-e-Sulb: Hard friction strengthens the organs and makes them hard.
- Dalak-e-Layyan: Soft friction makes the organ soft and relaxes the muscles.
- Dalak-e- Mutadil: It is done with moderate pressure (Nafees,1934).

According to Duration

- Dalak-e-Kaseer; Friction which is done for long duration makes the body thin by dissolving the fluid of the body (Nafees,1934).
- Dalak-e-Qaleel: Friction which is done for short duration produces heat in small quantity (ibn Rushd,1980).
- Dalak-e-Mutadil: Friction which is done for moderate duration makes the body fat and increases the mass of the muscles (Nafees,1934).

According to Speed

- Dalak-e-Saree: Friction which is done rapidly produces heat and dryness in the body.

It makes the body hard.

- Dalak-e- Batee: Friction which is done slowly produces heat in small quantity.
- Dalak-e- Mutadil: Friction which is done with moderate speed produces heat and dryness in the body moderately and make the body hard(Majoosi,1889).

After combination of these 9 elementary types, 27 compound types are formed (Majoosi,1989).

There are some other types of Dalak such as Dalak-e-Khashin, Dalak-e-Amlas, Dalak-e-Istedaad, Dalak-e-Isterdaad (Nafees,1934). Dalak-e-Khashin is done by rough hands or rough cloths It draws the blood rapidly towards the organs and makes them red. Dalak-e-Amlas is done with soft hands or soft cloths. It draws blood towards the organ slowly. Dalak-e-Istedaad is done before the exercise to prepare the body for exercise. Its helps in the elimination of toxins by liquefying them. Dalak-e-Isterdaad is done after the exercise to restore the energy of the body (Nafees,1934).

Massage relieves pain (Ibn Sina, 1971; Feinstein, 1995; Thomas, 2002), produces heat (Ibn sina,1992; Nair 1997a), helps in excretion of toxins (Ibn Rushd, 1980; Garg, 2002), excretes baridmadda (cold matter) (Nafees, 1934), reduces swelling (Ibn Sina, 1971; Philip, 1989) and relaxes muscles (Ibn Rushd, 1990; Feinstein, 1995; Philip, 1989).

The modern massage consists of 'four basic strokes (I) **Effleurage**, (II) **Kneading**, (III) **Percussion** and (IV) **vibration** (Feinstein, 1995; Thomas, 2002).

(I) **EFFLEURAGE**: It is a preparatory and concluding stroke of massage. It is non-invasive because it puts no pressure on the organ. It consists of circling, friction, fanning and feathering strokes. It is performed by the palms of the hands (Stewart,1999). It relaxes the muscles and improves the circulation of superficial small blood vessels. It also mechanically aids in the drainage of venous blood and lymphatic fluid (Nair,1997b).

(II) **KNEADING**: Kneading means to make dough. It consists of all the varieties of actions which a baker performs for kneading the dough (Nair, 1997b). It consists of Petrissage, digital kneading, thumbing, picking-up, wringing, rolling and stretching strokes (Stewart,1999). It stimulates the vital activities of the part over which it is employed. The nerves, blood vessels, glands, cellular exchange and other processes of the tissues are stimulated. It increases the blood supply of the area over which it is applied (Nair, 1997b).

(III) **PERCUSSION**: Percussion consists of blows performed in different ways and with different degree of force (Nair, 1997c). It consists of cupping, beating and tapping strokes (Stewart, 1999). It has powerful excitant effect. It stimulates the nerve centre of the area on which it is employed (Nair, 1997c).

(IV) **VIBRATION**: It consists of fine vibratory or shaking movements which are employed by the masseur. It is applied on the extremities and head. It has stimulant action on the area over which it is employed. It dilates the blood vessels and increases the blood supply (Nair, 1997d).

Massage relieves the pain by interfering with pain signals' pathway to the brain, a Process called "gate control theory". Massage stimulates the release of endorphin, morphin like substance that the body manufactures in the brain and spinal cord (Feinstein, 1995). Massage on the soft part above the joint relieves pain by emptying the lymph and blood vessels of the part (Nair 1997a). Massage relieves muscle tension and spasm. Experts suggest that tense muscles are usually deprived of oxygen because tightness reduces the blood circulation to the area. Massage increases the circulation bringing with it what the muscles need-oxygen and other form of nutrients. As a result muscles relax and pain decreases (Feinstein, 1995).

Osteoarthritis is a chronic disease of joints. It is a degenerative disorder which may ' cause disabilities in the old age persons. It is characterized by pain, tenderness, morning stiffness, sometimes swelling and decreased range of movement of the affected joint (Datey, 1979). It may lead to the disability. Pain is caused by venous engorgement of subchondral bone, accumulation of fluid in the joint and sinovitis (Andreoli, 2004). Morning stiffness is caused by loss of joint lubrication, chronic oedema in per articular structure and swelling of articular cartilage (Porter, 2003)' Muscle spasm.is responsible for decreased range of movement. Pain causes disuse of affected joint resulting in wasting of muscles (Warner, 1998).

Roghan-e-Surkh is a Unani medicinal oil and contains various ingredients such as Ushna, Sandal Surkh, HabbulGhurab, Dar-e-hald, Kaiphal, Narakchur, Haldi, Akh, Lehsun, Roghan-e-Sarsoon, Roghan-e-Rai, Roghan-e-darchini, Roghan-e-Laung and Roghan-e-Kunjad. It is useful for the treatment of arthritis, sciatica, gout, backache, paralysis, facial paralysis, trauma and swelling (Anonymous,"1986"). Most) of its ingredients have harmizaj except Sandal Surkh and Dar-e-hald. Ushna, HabbulGhurab, 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 properties (Abdul, 1991; Sayyed, 2002).

MATERIALS AND METHODS

The present study was conducted in Centre for Unani ilaj –bit –Tadbeer – Regimental Therapy, a unit of Niamath Science Academy, Puduvoyal village, 40 km from Chennai, a project funded by Ministry of AYUSH, Govt. of India. 60 patients suffering from osteoarthritis, of both sex and between the age of 40 to 80 years were included in this study. Their written consents were taken.They were randomly selected. Thorough examinations of the patients were done X-ray of the

affected joint was taken to confirm the diagnosis of osteoarthritis. RA test was done to exclude the patients having Rheumatoid Arthritis. The patients were divided into two groups, 30 in Group A (control group) and 30 in Group B (test group). The patients of Group A (control group) were massaged with Roghan-e-Surkh on the affected joint for 8-10 minutes for 14 days. Roghan-e-Surkh manufactured by Hamdard (wakf) was used for this purpose. The patients of Group B (test group) were massaged without Roghan-e-Surkh on the affected joint for 8-10 minutes for 14 days. Vegetable oil sesame oil was used in Group B for lubrication. In both the groups massage was done with moderate pressure and for moderate duration on the affected joint and its related muscles too. The direction of massage was from periphery towards the centre (centripetal friction).

Parameters of the Study (1) Pain (2) Swelling (3) Morning stiffness (4) Tenderness (S) Decreased range of Movement 0-3 score was given as per the severity of parameter (0 for absent/normal and 3 for severest form of parameter)

The parameters were observed before the treatment (Baseline) and at the end of 1st week (1st FU), 2nd week (IInd FU). One week after the completion of treatment, a follow-up (IIIrd FU) was done to note any changes in the parameters after the stoppage of treatment.

Before treatment and after treatment score was compared and analysed by paired 't' test.

Observations

Table no. 1 shows the distribution of patients according to age. Mean age of the, patients was 53.7. Most of the patients were between the age group of 41-50 (35% patients). Table no.2 shows the distribution of patients as per sex. 31(51.66%) male and 29 (48.33%) females were present in this study. Table no. 3 shows the distribution of patients according to joints affected by osteoarthritis. 35(58.3%) patients had osteoarthritis of knee joints, 4(6.6%) patients had osteoarthritis of cervical spine and 21(35%) patients had osteoarthritis of lumbosacral spine. Side effects such as local reaction, itching were not found during the treatment.

RESULTS AND DISCUSSIONS

After the completion of treatment significant reduction of symptoms was found in both the groups. Table no. 4 shows the comparison and changes of parameters between Group A (control group) and Group B (test group).

- Mean of the pain in group 'A' before the treatment was 2.3 and after the treatment it was 0.25. In group 'B' it was 2.25 before the treatment and 0.85 after the treatment.
- Mean of the swelling in group 'A' before the treatment was 0.3 and after the treatment it was 0.05. In group 'B' it was 0.5 before the treatment and 0.15 after the treatment.
- Mean of morning stiffness in group 'A' before the treatment was 1.45 and after the treatment it was 0.15. In group 'B' it was 1.55 and 0.45 after the treatment.
- Mean of tenderness in group 'A' before the treatment was 1.4 and after the treatment it was 0.15. In group 'B' it was 1.35 and 0.4 after the treatment.
- Mean of decreased range of movement in group 'A' before the treatment was 1.3 and the treatment it was 0.15. In group 'B' it was 1.35 before the treatment and 0.45 after the treatment.

It was found that Unani Massage with Roghan-e-Surkh is more effective than without it because most of its ingredients have harmizaj (hot temperament). Some of them have musakkin (analgesic) and muhallil (anti-inflammatory)

effects. Massage is also effective without Roghan-e-Surkh because it reduces pain, produces heat, excretes baridmadda (cold matter), relaxes muscles and reduces swelling. Relaxation of muscles also helps in restoration of normal range of the affected joint.

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