



ROLE OF MASSAGE IN PAIN MANAGEMENT (A REVIEW)

**Dr Aliya Fareed
Nowshahri**

Associate Professor, Hod Kuliya, Kashmir Tibbia College Hospital And Research Centre, Taleemabad Shilwath Sonawari Pin 193501, Bandipora J&k, India. University Of Kashmir

ABSTRACT The healing power of a well placed hand is so apparent that just about every culture in history has used massage to relieve pain. Pain is multidimensional and may be better addressed through a holistic, biopsychosocial approach. Massage therapy is commonly practiced among patients seeking pain management. Now a day's massage therapy is considered part of complementary and alternative medicine (CAM) In unani system of medicine dalak known as massage is an ancient mode of treatment. Massage has been advocated in western health care. Practices at least since the time of Hippocrates (460-377 BC) the "father of medicine" Dalak is one of the very important regimes among the procedures of ilaj-bit-tadbeer (regimental therapy) for neurological and musculoskeletal disorders. This review articles aims to explore the preventive as well as therapeutic application of dalak (massage) in perspective of classical unani texts and their indications in psychosomatic and neurological disorders.

KEYWORDS : CAM, dalak, pain, regimental therapy.

INTRODUCTION

There has been rise in the use of complimentary and integrative medicine (CIM) therapies, due to the high prevalence of pain, unsatisfactory results from conversional pain treatment and the need to address the whole patient. One of the most prevalent and popular CIM treatment is massage therapy, which involves the manipulation of soft tissue to elevate pain and discomfort (1, 2). Massage is one of the oldest forms of remedial therapy and first practiced in Chinese and Mesopotamian civilizations more than 5000 years ago. The art of massage was well known to ancient Greek physicians. In 5th century BC Buqrat (Hippocrates) wrote that the way of health is aromatic bath and an oiled massage every day. Massage is an oldest practice, which was used almost all the civilizations in the history. Hippocrates was the 1st man to discuss the qualities and contraindications of the massage.

In first century celsus in his book "De medicine" wrote the use of rubbing and massage in prevention of certain ailments.

Galen (125-195 AD) wrote about 16 books related to exercise and massage. In 1st volume of "canon of medicine" the great physician Avicenna discussed the various types of Dalak. Nicholas Andry (1741 AD) in his book "L orthopedic" has mentioned the effects of massage on the circulation and the skin colour (3). According to Ibne Rushd, massage is a type of exercise and is used for removal of waste metabolites of digestion (24).

Massage is a type of manual kneading or manipulating the soft tissues to relieve pain, discomfort, stress to preserve or promote health and wellness (5). In unani medicine dalak known as massage is a form of Riyazat (exercise) as a manipulative technique by means of hands on muscles.

Pain is multi-dimensional and may be better addressed through a holistic, bio-psychosocial approach. Massage therapy is commonly practiced among patients seeking pain management.

Pain is currently recognized as the most compelling reason for an individual to seek medical attentions from a general practitioner and accounts for approximately 80% of physician visits (6, 7, and 8).

Massage therapy has beneficial effects on varying conditions including prenatal depression, preterm infants, full term infants, autism, skin conditions, pain syndrome including arthritis and fibromyalgia, hypertension, autoimmune conditions including HIV and breast cancer and aging problems including Parkinson's and dementia.

Massage therapy used in various conditions

1. In vitro fertilization, oscillating vibrations were used prior to the transfer of embryo. The positive effects included greater pregnancy rates based on urine assays and ongoing pregnancies measured by fetal heart rate and birth rates as well as miscarriage rates. It has to be speculated that the improved embryo

implantation may have related to relaxation, reduced stress as well as decreased uterine contractions and possibly increased blood flow to that region (9).

- Several studies have shown that the massage therapy by a therapist and by significant others reduces prenatal depression and in turn increases gestational age and birth weight (10).
- In a recent study, massage therapy in preterm infants twice a day for two weeks for 15 minutes per session has significantly increases their weight, Height and head circumference. It has been studied that oil massage has more positive results in preterm infants in weight gain than non oil massage (10, 11).
- Massage improves the gastrointestinal function by increasing vagal activity leading to greater gastric motility in preterm infants (10).
- Massage therapy has been used to reduce several skin problems including cleft, lip scar, burn scars, post surgery scars and ulcers.

Massage therapy for pain

Massage reduces the pain in chronic pain conditions from lower back pain during pregnancy to labor pain, migraine headaches, premenstrual syndrome, chronic fatigue, fibromyalgia, carpal tunnel syndrome and rheumatoid arthritis (12).

Massage has also been effective for children and adolescents attending a chronic pediatric pain clinic, after the therapy sessions the children and adolescents reported significantly lower levels of pain, discomfort and depression mood. In a study on post operative pain management in adults, back massage resulted in decreased pain intensity as well as lower anxiety levels (13, 14).

Arthritis patients have also experienced less pain following massage. For example individuals with hand arthritis had less pain and greater grip strength following massage therapy and even less pain when applying a topical analgesic following the massage. Massage has also effective for rheumatoid arthritis in the upper limbs. It has been analyzed that massage on neck and shoulder pain showed immediate and short effects and headaches associated with neck pain also been reduced by massage therapy. Massage out comes have been positive for osteoarthritis of the knee (15, 16)

Massage outcomes have been positive for osteoarthritis of the knee. Pain has also been relieved by massage therapy following arthroscopic surgery for the knee. Massage is more effective for low back pain than placebo (17)

Massage has also been effective for acute pain and mood shifts cancer patients. According to some authors 73% of cancer patients use massage therapy in the U.S. some large cancer centers in the U.S. have integrated massage therapy into their programs based on the positive effects of massage on cancer pain.

Massage therapies are among the most frequently used complimentary treatments, their effectiveness with regards to the reduction of

symptoms of pain, anxiety and depression in oncological patients have been examined in several studies. Other painful conditions have benefitted from massage including burn wounds, post cardiac surgery pain, fibromyalgia, and Parkinson's (18, 19 and 20).

Under lying mechanisms for massage reducing pain

The mechanism that has most frequently used to explain massage therapy effects on pain syndromes, is calling the gate control theory. According to that theory pain is thought to stimulate shorter and less myelinated (insulated) nerve fibers, so that the pain signal requires more time to reach the brain than pressure signals which are carried by nerve fibers that are more myelinated and longer and therefore able to transmit the pressure stimulus faster than the pain stimulus can be transmitted. The pressure stimulus reaches the brain prior to the pain message and "close the gate" to the pain stimulus. This metaphor has been used for the electrical and biochemical changes that are thought to occur following a pain stimulus (21).

Another theory is that with increasing serotonin levels, pain is the decreased in a much as serotonin is the body's natural anti pain neurotransmitter. Serotonin levels are increased by massage therapy.

Other changes following massage therapy include increased vagal activity that is typically low in depressed individuals. The flat facial expressions and vocal intonation contour noted in depressed individuals could be explained by low vocal activity given that the vagus nerve stimulates the face and voice muscles (23).

The massage enhances vagal activity which in turn reduces cortisol leading to many effects including reduced pain and increased immune function. Cortisol levels that are often high in depression, have decreased following moderate pressure massage as have neurotransmitters associated with stress, i.e. nor epinephrine levels and serotonin and dopamine have increased following moderate pressure massage (22).

Indications of massage in unani system of medicine

In unani system, dalak is recommended for both preventive and therapeutic purpose.

In children's for preventive application

Children should be massaged in 3rd year when they wake up from the sleep in the morning and be given bath. It boosts immunity and endows strength to the body organs.

In youngsters

The whole body should be massaged slowly with Roghan-e-Zaitoon shireen (sweet olive oil) before exercise. Which leads to the hardness of skin pores and result in the stagnation of waste metabolites, which should be excreted through skin? After exercise body is massaged with firm hands to evacuate the stagnant waste metabolites in subcutaneous tissues and to make body muscular and strong (24).

In elderly person

In elderly persons moderate massage is very effective. It should be given twice a day in lean and thin persons (25).

In pregnant women

It is strongly recommended to massage back, abdomen and pubic area few days before the delivery with Roghan-e-Zanbaq and Roghan-e-Kheeri as it helps in easy passage of foetus at the time of delivery (26).

For therapeutic application

In the treatment of pain

To relieve pain the affected part of the body should be massaged softly for a longer duration (25).

Pain due to galba-e-barodat (excessive cold): Massage the affected part with the Roghan-e-nargis/ Roghan-e-Sosan mixed with Dhatoora oil (27).

Pain due to galba-e-Hararat (Excessive heat): Dalak should be done with Roghan-e-Hina (22).

Acute neurological pain: Turkish bath, local massage of Roghan-e-sosan, Roghan-e-Nargis and Roghan-e-Gaar relive the neurologic pain and flaccidity (27).

Headache : in suda haar, apply Roghan-e-Banafsha on soles and in suda barid apply lukewarm oils on scalp and massage for few minutes (28).

Nervous system

Hemiparasis

Massage the affected side of the body with Roghan-e-Qust daily (26)

Laqwa (Bells palsy/ facial paralysis)

Massage should be done firmly with Roghan-e-Qust on face and cervical vertebrae. If laqwa (facial paralysis) is due to yaboosat, massage the head with Roghan-e-Banafsha and cervical vertebrae with Roghan-e-Khatmi.

Tashannuj muzmin (chronic spasm): apply lukewarm Roghan-e-Banafsha or Roghan-e-Kaddu on affected parts (26).

Sarsaam (Meningitis): massage the scalp with vinegar mixed with Roghan-e-Banafsha and milk (8).

Arqunnisa (sciatica): apply Roghan-e-kunjad in the portions inflicted with the symptoms (29).

Sakta (shock): in shock apply warm tempered oil with sulphur on the whole body (27).

Sidr (vertigo): at the time of attack hold the limb tightly and massage them (27)

Malankholiya (melancholia): massage the ribs with olive oil and Roghan-e-sosan softly with hands on the abdomen (27).

Muraaqiyya (a type of melancholia): first given bath and apply Roghan-e-Banafsha and Roghan-e-Gul on the scalp (27).

Fasad-e-zikir (dementia): if it is resulted from excessive barodat and yabosat, then apply Roghan-e-khiri and Roghan-e-sosan on the scalp daily (27).

Sara (epilepsy): during episodes of fits, massage the spasmodic body parts with oils, water and emollients. At first massage the whole body, then lower portion of head and cervical vertebrae (27).

Mustarkhi muffasil (flaccid joints): massage with Roghan-e-Qust mixed with Roghan-e-Zaitoon as it has potential effects in the management of flaccid joints (2, 27).

Isterkha (flaccidity): apply Roghan-e-sosan and Roghan-e-Nargis daily (27).

Paralysis

Massage the body with Roghan-e-Qust and aaqar qarha with firm hands on affected parts of the body (22). Massage the flaccid and paralyzed joints with Roghan-e-Qust, farbyoon and miya firmly till they turn red (27).

Rasha (tremor): taking jund baidastar orally or rubbing it on the manifested parts is very useful (27).

Khidr (par aesthesia): massage the diseased part with Roghan-e-Farbiyoon mixed with castor oil and hot wax (27).

Tashannuj-e-haad (acute spasm): massage the affected parts with Roghan-e-Sudaab and Roghan-e-Qisa-ul-himaar or massage with olive oil mixed with sulphur (30). Jund baidastar is the drug of choice in all the diseases of nervous system

Nafsudum (haemoptysis): massage with lukewarm astringent oils on the chest to arrest the bleeding and then apply lukewarm oil or Roghan-e-Qissa-ul-himaar (27).

Zeeq-un-Nafs (asthma): massage the lateral parts of the thorax with Roghan-e-naardeen, Roghan-e-Gaar, Rogahn-e-Sudaab and hot temperament oils to alleviate the symptoms of asthma (25).

Naqras wa wajaul Mufasil (Gout and Arthritis): soft massage daily with Roghan-e-sosan is very useful in these conditions (26).

Waja-ul-anaq (Cervical spondylosis, frozen shoulder): massage the affected area with Roghan-e-shibbat, Roghan-e-Baboona and Roghan-e-Murakab (30).

Waja-ul-zuhar and waja-ul-marik (Backache): apply Roghan-e-Tukhmi Injeer, Roghan-e-Qurtum and Roghan-e-Qust firmly with

hands (31).

Wrist joint pain/carpel tunnel syndrome: local application of Roghan-e-Haft Berg, Roghan-e-Baboona and Roghan-e-Murakab softly with hands is very useful in such pain (25).

For generalized weakness: the whole body should be massaged softly with hands in the morning with Roghan-e-zaitoon and hot wax.

In swollen limbs: boil zoofa khushik, kamoon and saatar hindi in Roghan-e-nardeen and massage on the affected limbs (32).

In sexual disorders: massage on male sexual organ with certain oils like; Roghan-e-sosan, Roghan-e-zambaq, Roghan-e-nargis, Roghan-e-yasmin, Roghan-e-kheeri, Roghan-e-Punba dana with Aaqar Qarha etc. in the different conditions (31).

In unani system of medicine, medicated massage is indicated for the

S.NO.	Diseases	Roghaniyat (Therapeutic oils)
1	Waja uz zahr (low back pain)	Roghane qust, Roghane suddab, Roghane farfiyoon, Roghane sosan, Roghane balsa, Roghane baboona, Roghane shibit, Roghane Narjeel kuhna, Roghane Habb Utraz, Roghane joz kuhna, Roghane Qurtum, Roghane Arand, Roghane Habbul Ghaar.
2	Wajaul Mufasil Barid (chronic arthritis due to cold temperament)	Roghane sosan, Roghane qust, Roghane Nardin, Roghane Narjeel, Roghane Nargis, Roghane Chameeli safaid, Roghane Arand, Roghane Sumbul, Roghane Hanzal, Roghane Jundbedastar, Roghane Khardal, Roghane Jouz Rumi,
3	Wajaul Mufasil Yabis (Arthritis due to dry temperature)	Roghane Badam, Roghane Kaddu, Roghane Gul.
4	Wajaul Mufasil Balghami (Chronic Arthritis due to phlegm)	Roghane Dhatoora, Roghane Hina, Roghane Auraq(Roghane haft berg), Roghane baid Anjeer, Roghane Nardeen, Roghane Qust, Roghane Badam talakh, Roghane Harmal, Roghane Naranj, Roghane Baboona, Roghane Shibit, Roghane Sumbul.
5	Wajaul Mufasil Saudawi (chronic Arthritis due to black bile)	Roghane sosan, Roghane Qust, Roghane Baid Anjeer, Roghane Qurtum, Roghane Baboona, Roghane Shibit.
6	Wajaul Mufasil Reehi (Arthritis due to accumulation of Riyah)	Roghane Buskhapra, Roghane Gul, Roghane Kunjud, Roghane Baboona, Roghane Zanjbeel, Roghane Shibit.
7	Tahajjure Mufasil (Ankylosing Arthritis)	Roghane Buskhapra, Roghane Baboona, Roghane Chobchini, Roghane sosan.
8	Waja ul Warik Barid wa Murakkab (coccydynia)	Roghane shibit, Roghane Farfiyoon, Roghane Handaqooqi, Roghane Arand, Roghane Qust, Roghane Aaqarqarha, Roghane Hina, Roghane jundbedastar.
9	Irqunnisa (Sciatica)	Roghane Qust, Roghane farfiyoon, Roghane Aaqarqarha, Roghane Hina, Roghane Jundbedastar, Roghane kaloonji, Roghane khardal, Roghane sosan, Roghane shibit, Roghane Gul, Roghane Kunjud, Roghane sumbul, Roghane chameeli, Roghane Rai Bel, Roghane zaitoon, Roghane Nardeen, Roghane Narjeel, Roghane Hanzal.
10	Niqras Barid (chronic Giut due to cold temperament)	Roghane sosan, Roghane sumbul, Roghane Ghaar, Roghane suddab, Roghane Hanzal.

Classification of massage

In unani system of medicine various kinds of massage has been recommended for different purposes.

Dalak Baseet	Dalak Murakab
(A) On the basis of kaifiyat (quality of pressure applied) <ol style="list-style-type: none"> i. Dalak sulb (hard/firm massage) ii. Dalak layyin (smooth/gentle massage) iii. Dalak moatadil (moderate massage) (B) On the basis of kammiyat (quantity of pressure applied) <ol style="list-style-type: none"> i. Dalak kaseer (prolonged/heavy massage) ii. Dalak qaleel (short massage) iii. Dalak moatadil (moderate massage) 	Dalak muarakab is the combination of different types of dalak. <ol style="list-style-type: none"> I. Dalak-e-sulb kaseer (firm massage with prolonged duration) ii. Dalak-e-sulb kaleel (firm massage with short duration) iii. Dalak-e-sulb moatadil (firm massage with moderate duration) iv. Dalak-e-layyin kaseer (gentle massage with prolonged duration) v. Dalak-e-layyin qaleel (gentle massage with short duration) vi. Dalak-e-layyin moatadil (gentle massage with moderate duration) vii. Dalak-e-moatadil kaseer (moderate massage with prolonged duration) viii. Dalak-e-moatadil qaleel (moderate massage with short duration) ix. Dalak-e-moatadil moatadil (moderate massage with moderate duration)

There are also some other special types of massage like:-

1. Dalak kashin (Rough massage)

This type of massage is done with a rough piece of cloth. It draws the blood rapidly to the surface.

2. Dalak amlas (Gentle massage)

This type of massage carried out softly with hands or soft piece of cloth.

3. Dalak istedad (preparatory massage before starting exercise)

Qawi, zaef, motadil, taweel and qaseer. It is a special type of massage which is done gently in the beginning and then vigorously towards the end. It is done before exercise in order to prepare the body for undergoing different movements during exercise.

promotion of health as well as therapeutic purposes, mainly in psychosomatic and neurological disorders. Here are the various indications of massage along with Roghaniyat.

Mechanism of action of massage

According to unani medicine, the mechanism of action of Dalak (Massage) is based on holistic approach of two fundamental concepts i.e. Tankiyae Mawaad (evacuation of morbid humour) Imaalae Mawaad (diversion of humour). Tankiyae mawaad means the resolution and excretion of morbid humors and excess fluids from the body. There by maintaining the homeostasis in the quality and quantity of four bodily humors, which is actually responsible for the maintenance of normal health? Imaalae mawaad refers to the diversion of the morbid fluids from the site of affected organ to the site where from it is easily expelled out from the body tissues. It also induces sedation, analgesic and increases blood circulation (33).

4. Dalak isterdad (Relaxing massage)

It is also known as dalak musakkin. It is done towards the end of exercise and should be carried out gently and in moderation, preferably with oil. (24, 29)

Time and duration of massage.

Time of massage has got great importance in unani pathy. It is very important to know when massage has to be done and when not to avoid the adverse consequences.

- . Massage should not be done immediately after taking food.
- . Massage should not be done in empty stomach.
- . It should be done in the morning.
- . It can also be done in the evening, but 3-4 hours after dinner.
- . In maosam-e-rabee (spring season) and maosam-e-khareef

(autumn) massage should be done at Noon, In maosam-e-shaif (summer) massage should be done in the morning and in maosam-e-shitaa (winter) in the afternoon (25).

Duration of massage depends on strength of organ.

- Mizaj of organ.
- Type of oil used.
- mizaj of disease.
- mizaj of person.
- condition of disease (acute, sub-acute, chronic)
- condition of patient (obese, lethargic, lean, healthy)
- Seasons.
- Desired outcome.
- Temperature of surroundings.
- Duration of massage should be 30-40 minutes in healthy individuals with no pains just for relaxation.
- For hours in pains and ache.
- For 30-35 minutes in physically weak people.
- For 25-30 minutes in those people who are habitual to it.
- An hour or more for old people.

Purpose of Dalak

- To make the body firm, if it is loose and flabby; to soften it, if the body is hard.
- To eliminate the ratoobat (fluid) from body that is left after purgation.
- To develop the body as well as to improve and to maintain blood circulation of the particular organ.
- For dissolution of riyah(morbid gases) from the body.
- To remove the barid mizaj(cold temperament).
- For imalah (to divert the matter from one organ to another)
- Massage is done by using oil with an aim to retain the ratoobat (moisture of the body).

CONCLUSION:-

Massage therapy compared to no treatment should be strongly recommended as a pain management option. Most massage techniques are designed to promote pain relief, stress reduction and improved movement in daily living.

Clinical trials shows efficacy in various disease of different system for better results. It is necessary that unani drugs and medicated oils bath should be used according to the mizaj of the disease. From the above discussion, it can be concluded that dalak plays an important role in maintaining normal health and it is the best preventive and a curative regimen.

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