Therapeutic potentials of Dalk (Massage therapy): An overview

Abuzar Lari, Mohammed Tausif and Javed Ah Lari

Abstract
Regimenal therapies are mostly non medicinal procedures for health promotion in Unani system of medicine. Several regimens have been used by Unani physicians since ancient time. In this review paper, authors have discussed therapeutic potentials of Dalk (Massage) therapy from holistic and modern perspective. Massage is most popular form of Regimenal therapy and has been in use since antiquity. It is a mode of curing certain forms of disease by systemic manipulations, massage with medicated oils is indicated in a number of neurological, musculoskeletal disorders for prophylactic and therapeutic purpose. According to Hippocrates (460 BC–370 BC), the father of medicine, massage, balanced diet, exercise, rest and fresh air are essential to maintain health of a person. According to Ibn Rushd, massage is a type of exercise used for removal of toxins or waste metabolites from the body. A number of Unani physicians recommended Dalk as preventive as well as curative measure.

Keywords: Dalk, regimenal therapy, massage therapy, medicated oil

Introduction
USM: Unani medicine is also called as Greco-Arabic medicine, it is based on the wisdom and tradition of great Greek physician and father of medicine Buqrat (460-377BC), Roman physician Jalinoos (129-200AD) and it is further elaborated by Arab and Persian physician such as Ibn-Sina, Al-Razi, Ibn-Nafis, Al-Zahrawi. Unani medicine is popular form of traditional medicine, widely practiced and established in many countries [1, 2] In Unani system of medicine treatment strategy is based on 4 Approaches. Ilaj-bit-Ghiza (Dieterotherapy), Ilaj-bit-Dawa (Pharmacotherapy), Ilaj-bit-Tadbeer (Regimenal Therapy) and Ilaj-bit-Yad (Surgery) [3].

Introduction of Ilaj-Bit-Tadbeer (Regimenal therapy): Ilaj Bit Tadbeer or Regimenal therapy is one of the most important methods among other methods of treatment. Regimenal therapy involves some techniques which use to improve and stabilize the constituents of body. These therapies are mostly non medicinal procedures for health promotion in unani medicine. There are several regimens used such as Hammam(Bathing), Dalk(Massage), Takmeed(Fomentation), Hijamah(Cupping), Ivrasle-Alaj(Leeching), Fasd(Venessection), Ishaal(Purgation), Riyazat(Exercise), Qui(Emesis), Idrare Baul(Diuresis). These regimes used independently or in combination with other methods of treatment. In this review, a brief concept of Dalk (Massage therapy) have been gathered to show its therapeutic efficacy [4].

Introduction of Massage Therapy: Dalk (massage therapy) is comes under the commonest regimen which practiced almost all over the world, Word Massage derived from the Arabic word “Mass” which means to Touch, Feel, Handle, Pressure or the Greek word “Massein” which means to knead [5,6,7]. French colonies in India first used the term “Massage” during 1761-1773 and included it for first time in 1812 in French–German dictionary. According to oxford dictionary in 1879 this word entered in English literature [8]. Massage therapy can be described as the manipulation of soft tissue by a trained massage therapist for therapeutic purpose [9]. According to Ibn-Rushd (1126-1198AD) Dalk is the method used for the removal of waste metabolites of digestion. It also states that Dalk is method of Pressure, Rubbing, Vibrating, or stimulating the external soft part of body with hand or cloths with or without oils [3]. In massage therapy the medium through which an exchange of energies occurs between the therapist and the recipient, by this there is easing of muscle tightness and increasing of circulation occurs. Consequently massage does not consist of three effleurage strokes in one direction followed by three strokes in the other direction.
Knowing all the important theoretical background it is necessary for the practitioner to develop the skill of recognizing most suitable techniques and develop palpatory skills to assess the tissue of massage. So that practitioner can determine the number of strokes, pressure, speed on particular region of body in particular patient. Massage requires time, patient, pleasant surroundings. It not possible to make relax someone quickly it take time to induce response, hemostasis and healing [6].

**Historical Background**

**Massage therapy:** History of *Dalk* (massage) is back to the starting of human civilization. Massage was used to expel waste product from the body of patient in *Babylon* and *Assyria*. In eastern cultures massage has been practiced since ancient times. In 2nd millenium BC the 1st description of massage is found in *Ayurveda*-medical part of *Atharveda*. In India use of massage were well known before its modern name come into being. In Sanskrit literature it is known as *Champan, Mardan*, as well as *Abhyang* it mention in *Ayurveda*. After that in Chinese book “The Yellow Emperors Classic Book of Internal Medicine” from 2700BC Its recommend breathing exercise, massage and exercise of hand and feet as treatment for paralysis, chills and fever. 2500BC Egyptian tomb paintings show that massage therapy was also part of their medical tradition. Egyptian gets the credit for pioneering reflexology. 1500BC 1st known written massage therapy tradition come from India, but practice may have actually originated around 3000BC or earlier, *Hindus* used the art of healing touch in practice of *Ayurvedic* medicine. In *Greek* and *Romans* physicians the principle methods of relieving pain is massage therapy. In earlier *Asclepius* (1200BC) also used massage for relieving pain and also permed massage along with herbs, diet, relaxation and hydrotherapy. He also discovered that sleep might be induced by gentle “Stroking”. In about (907-619BC) Tang Dynasty recognized massage as a part of medicinal practice. In Greek, *Buqrat* (460-380BC). Generally accepted as father of Medicine and author of *Hippocratic Oath*, wrote in his memories. “The Physician Must Br Experienced in Many things But Assuredly also In Rubbing.” *Buqrat* is 1st person who discussed qualities and contraindication of massage. He recognized massage as a therapeutic agent and called it “Anatrispsis” [3] The expression for massage in India was shampooing, in china it was known as Cong-fou, in Japan as *Ambouk* [9]. In 1st century, *Roman* physician *Celsius* wrote an eight volume book “De Medicine” in 7th volume he clearly describe the use of rubbing and massage in prevention and therapeutics of some ailments [3]. *Ibn-Sina* (980-1037AD) he discussed various type of *Dalk* in the 1st Vol of “Al-Qanoon Fitt Tibb” [1] *Greek* and *Romans* left behind a lot of literature in which they have mentioned the use of massage in condition like Paralysis, Cold extremities and Muscle Sprain etc. After fall of Roman Empire massage and medical gymnastics went back to level of folk medicine. Toward 15th century people again started writing about massage. *Antonius, Gazius, Hieronymus, Mercurius* and *Ambroise-Pare* gathered the teaching of *Hippocrates* and *Galen* and started using massage in various conditions. *Ambroise-Pare* (1510-1590AD) who was a great surgeon started the application of massage to surgical patients. In 16th century *Fabricus Ab Aequapendente* who was the tutor of William Harvey wrote a book on massage. *Nicolas Andry* in his L’orthoprdie published in 1741, describe the effect of massage on the circulation and skin color. In 19th century *Per Henrik Ling* (1776-1839AD) his system (*Swedish massage*) was based on the study of gymnastic and physiology and on the techniques acquired from *china, Egypt, Greece* and *Rome*. He induced the French word such as *Percussion, Tapotment, and Efflurage* etc. In *Swedish* system of massage after (1850AD) the number of books, articles and journals on gymnastics and massage increased remarkably. During this time two Doctoral thesis on massage by *Estrudef* in (1863AD) and *Mezer* in (1868AD) were published, where massage was published in appropriate manner. During 1st world war, patients suffering from nerve injury or shell shock were treated with massage. Towards the end of 19th century, massage was prescribed in combination with heat, exercise and electricity. During 1970s the influence of massage grew notably among Athletes. In 1996 summer Olympic was the major event when massage was offered as a core medical service. Now a Days massage used in ICU, for children, elderly people, heart attacks, strokes [10, 11, 12, 13, 14].

**Dalk:** *Dalk* is a special type of *Riyazat* (exercise) or *Harkat* (movement) which can be applied to a particular organ without involving the whole body, with the same beneficial effects like *Riyazat*.

**Therapeutic Properties of Dalk**

*Tabheel fuzzaat* (diffusion of morbid matter)  
*Tarqeq ratubat* (making body fluids thin in consistency)  
*Intishar hararat lateeef* (stimulation of body temperature)  
Strenghens the ligaments and muscles  
In addition to above mentioned properties, *Dalk* has also few unique properties which distinguishes it from other regimes.  
*Dalk* has the ability to expel highly viscous and sticky matter from particular organ, which cannot be expelled by common *Harkat* or *Riyazat*.  
*Dalk* can remove excessive *Buroodat* (coldness) and *Riyah* (gases) from the organs.  
*Dalk* can be specially utilized to displace morbid matter from one organ to another.  
*Dalk* can increase the size of an atrophied organ, because of its capability to stimulate and spread *Hararat* and dilate the organ vasculature [15, 16].

**Therapeutic Classification of Dalk:** Ancient *Unani* physicians have classified *Dalk* in accordance to pressure applied, duration of massage, article used to massage, whether massage is done before or after exercise, quantity and quality of massage. According to *Ibn-Sina* and *Majoosi*, *Dalk* is of four type’s e. g *Sub*, *Layyan*, *Kaseer*, *Moatadil*.

**Dalk-e-Sub:** It is type of massage where firm pressure is applied while stroking with hands. This make the body firm and strong by the virtue of eliminating the *Ratubat* that are responsible for the flaccidity of muscles.

**Dalk-e-Layyan:** This type of massage is done with soft hands, slowly without exerting much pressure with the purpose of getting muscles relaxed.

**Dalk-e-Kaseer:** This type of massage is done for longer duration, and helps in reducing the body fat and making the
the body for undergoing -issue. This type of massage from body. By working on these two concepts it also
bodily mechanism of Dalk: would then harden the body should be never by vigorous, rough or hard at the end as it
is to liquefy and eliminate the waste product, which is exercise and is also known as Dalk
loose, soft. The objective of the massage is always to make the body firm,
of cloth. It increases blood flow in the treated area. The
Dalk
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follows. On the basis of
Kammiyat
of the classification is as follows.
Kaseer, Layyan, Dalk
On the basis of Kammiyat he classified massage in following categories.
Dalk-e-Kaseer, Dalk-e-Qaleel, Dalk-e-Moatadil
Murrakab Types of Dalk on The Basis of Kammiyat (Quality) and Kammiyat (Quantity)
Other types of Dalk
Dalk-e-Khashin: here massage is done with a rough piece of cloth. It draws the blood rapidly to the surface. It should not be done for longer duration otherwise leads to excessive elimination of Ratubat from body.
Dalk-e-Amlas: it is carried out with soft hand or soft piece of cloth. It increases blood flow in the treated area. The objective of the massage is always to make the body firm, loose, soft.
Dalk-e-Istedad: this special type of massage is done before exercise in order to prepare the body for undergoing different movements during exercise. It is done gently in beginning and then towards the end so as to make waste product easily expellable while during exercise [1].
Sub-type of Dalk-e-Istedad
Dalk-e-Qawi, Dalk-e-Zaieef, Dalk-e-Moatadil
Dalk-e-Taweel, Dalk-e-Kaseer, Dalk-e-Moatadil
Dalk-e-Isterdad: this dalk is done towards the end of exercise and is also known as Dalk-e-Mussakin. Its purpose is to liquefy and eliminate the waste product, which is retained after exercise in the tissue. This type of massage should be carried out gently and preferably with oil. It should be never by vigorous, rough or hard at the end as it would then harden the body [15, 20, 21].
Mechanism of Dalk: According to Unani system, mechanism of Dalk was mainly based on Tanqiya-e-mavaad (Evacuation of morbid matter), and Imala-e-mavaad (Diversion of morbid matter). Tanqiya-e-mavaad means resolution and excretion of morbid humors and fluid from body, maintain homeostasis in quality and quantity of four bodily humors. Imala-e-mavaad means diversion of morbid fluids from affected site to where it easily expellable out from body. By working on these two concepts it also induces analgesia and sedation with help of Roghaniyat (oils) or without oils only with rubbing [22].
Therapeutic Massage: No uniform answer seems to exist to this question. Massage is one of those terms, which are easily understood than expressed. People find it difficult to define massage, but they are confident of its meaning. Many definitions of massage have been offered from time to time. Given below are some of the definitions: Massage is the systemic mode of curing certain forms of disease by systemic manipulation MURREL
Massage signifies a group of procedures, which are usually done with hand on the external tissue of the body in a variety of ways either with a curative, palliative or hygienic point in view. GRAHAM
Massage is healing art [8].
Classification of Therapeutic Massage Therapy
I) On the basis of character
Stroking Manipulation: Superficial, Deep (effleurege)
Pressure Manipulation
Kneading: it includes palmar kneading, digital kneading and ironing reinforced kneading. Pettrissage: it includes, lifting away skin, wringing, Skin rolling.
Fricion: it includes circular friction and transverse friction.
Percussion/Tapotent Manipulation: It includes clapping, hacking, tapping, beating, pounding, tenting, and contact heel percussion.
Vibratory Manipulation: It is done by vibrations and shaking.
II) On the basis of depth of Tissue Approached: Light, Deep
III) On the basis of part of Body Massaged: General, Local
IV) On the basis of Application of Pressure: Manual, Mechanical massage [8, 9, 23, 24].
Therapeutic Indications and uses of Dalk
Also indicated in removal of Riyah
In Waja-uz-Zahr
It is useful to soften the muscle if it is hard and if muscle is hard then it makes it soft also
Some times dalk is used for diversion of morbid matter (Khilt)
It is used to increased circulation locally
Dalk is also indicated in Aayae-Quroohi
Dalk is also indicated in Aayae-Tamaddudi
Dalk is also indicated in Aayae-Warmi [15, 19].
Contraindication of Dalk (Massage therapy)
In accumulation of pus
In acute inflammatory and swelling condition
In case of Hummiyat
In case of open wound, unhealed scars
Recent fracture sites
In diseases which loses the vessels [25].
Physiological effect of Massage
Effects on blood circulation: A moderate, consistent and
definite increase in the arterial flow is observed. Massage have direct as well as indirect effect on circulatory system. It influences blood circulation. It has an effect on cardiac function via the somatic-visceral reflex as well as a mechanical increase in blood flow. Studies show an increase in the rate of blood flow and cardiac volume with massage, this also enhanced venous return and improved circulation. It also reduces congestion by freeing soft tissues through manipulation and stretching.

**Effects on lymph circulation:** According to Paikov (1986), the human body contains 1200-1500 ml of lymph moving at the speed of 4 mm/sec and massage increases these to eight folds, Lymph flows from the interstitial spaces to the collecting vessels. Massage has an indirect effect in lymph circulation. Congestion in capillary network raises the Blood hydrostatic pressure, which leads excessive fluid moving into the interstitial spaces. Massage reduces the blood capillary congestion by enhancing the venous flow and it helps to lower the hydrostatic pressure and prevents formation of edema.

**Effects on the organs of digestion:** Some authors claim that massage on abdomen has very little impact in digestive system and other viscera. Others stated that it has significant effects, mechanically as well as reflex action also. A common consensus is that massage improve the circulation of viscera and via a reflex pathway causes contraction of smooth muscles. Also activates glandular secretions within gastrointestinal tract.

**Effects on the muscles:** Petriassage and Tapotement increase significant venous blood flow in muscles when there is venous stasis of skeletal muscles, by Petriassage the vascular bed is mechanically emptied and it refills with fresh blood supply and the stasis is reduced. tapotement was found to cause 5% increase in muscular blood flow, an increase in the blood flow caused additional temperature changes in the muscle. So there is a rise in temperature also occur by tapotement. Superficial hyperaemia was also observed by tapotement.

**Removal of metabolites:** By increasing the circulation through muscles, massage has the effect of draining the metabolites, including lactic acid and water. Similarly, carbon dioxide is eliminated by the improved venous return [3, 22]

**Conclusion**
The main purpose of this article is to make aware and update the knowledge of ancient art of massage of *Unani* medicine, beginning from history to the present era. *Dalk* plays an important role in maintaining normal health; it is beneficial in both preventive and curative Regimen It is necessary to choose appropriate oil for therapeutic massage according to the *Mizaj* of the diseases to exhibit better efficacy of the treatment. *Dalk* is used effectively for the Management of musculoskeletal and nervous disorders where medical treatment is of less value.

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