

## ***NUTOOL (THERAPEUTIC IRRIGATION) – AN OVERVIEW***

**Samreen Khan<sup>1\*</sup>, Mehjabeen Fatimah<sup>2</sup>, RafeAkhlaqueAnsari<sup>3</sup>**

<sup>1\*</sup>Assist.Professor, D/o Ilaj-bit-Tadbeer, SanskritiUnani Medical College and Hospital, Mathura

<sup>2</sup>Assist. Professor, D/o Jarahat, National Institute of Unani Medicine, Bengaluru

<sup>3</sup>Assist.Professor, D/o Ilaj Bit Tadbeer, HayatUnani Medical College and Research Centre, Lucknow.

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**ABSTRACT:** *Ilaj-bit-Tadbeer (regimenal therapy) is one of the favoured methods of treatment used in Unani system of medicine since the time immemorial. Literally, Ilaj stands for therapy or treatment and Tadbeer comes for regimen, therefore, Ilaj-bit-Tadbeer reflects treatment through regimen. Nutool (therapeutic irrigation) is one of the effective modalities of treatment in Ilaj-bit-Tadbeer. It is a unique therapeutic procedure in which a watery preparation like Joshanda, Khaisanda, oil, or plain water either hot or cold in temperature is poured from a particular height over the required part of the body to cure a number of diseases. The height should be atleast an extended hand span or more than that. Nutooltherapy is recommended for Tanquiya-e-Mawad-e-Fasida (evacuation of morbid materials), Imala-e-Mavad (diversion of matter) and Ta'adeel-e-Mizaj-e-A'za (normalization of morbid temperament). It is one of the oldest regimenal procedure which is indicated in waja-ul-mafasil (arthritis), sahar (insomnia), suda'a (headache), shaqeeqa (migraine), sarsaam (meningitis), warm-e-suddi (mastitis), warm-e-raham (metritis), sakta (stroke), ehtibas-e-baul (retention of urine), warm-e-masana (cystitis), ma-ul-raas (hydrocephalous), malankholia (melancholia), junoon (insanity), mania (mania), kuzaz (tetanus), zukaamwanazla-e-barid (cold and coryza).*

*Full length paper discusses the method and indications of Nutool therapy mentioned in unani system of medicine.*

**Key Words:** : *Ilaj-bit-Tadbeer, Nutool, Tanquiya-e-mawad-e-fasida, Ta'adeel-e-mizaj-e-a'za, Joshanda, Khaisanda*

**INTRODUCTION:** *Unani Physicians described following three modes of treatment.*<sup>1,2,3</sup>

- *Ilaj bit Tadbeer (Regimenal therapy) including*
- *IlajbilGhiza (Dieto-therapy),*
- *Ilaj bidDawa (Pharmacotherapy) and*
- *IlajbilYad (Surgery).*

*Ilaj bit Tadbeer is composed of two words Ilaj meaning treatment & tadbeer meaning regimen. Any favourable modification in AsbabeSittaZarooriya, aimed at treatment of the diseases is known as Ilaj bit tadbeer.*<sup>1,2,3,4</sup>

### **Historical background of Nutool therapy**

- *Nutoolor irrigation or pouring of medication or oil over different body parts is one of the preferential modes of treatment under Ilaj-bit-tadbeer mentioned in unani literature.*<sup>2,4,5,6,7</sup>
- *IbnSina states that it is one of the best treatment when tahallul-i-warm is required; and also in those cases where the temperament of a part of the body has to be altered along with strengthening it.*<sup>5,7</sup>
- *If there is accumulation of morbid matter*

*then hot Nutool should be used irrespective of temperament of organ, after that cold water Nutool should be given so that the softness developed by hot Nutool will be minimized by cold water and it will strengthen the organ. If there is accumulation of morbid matter, cold water Nutool will be done prior to hot water Nutool.*<sup>2,4,5,7</sup>

- *Ismail Jurjani recommends the use of khashkhash as Nutool to induce relaxation and the addition of baboona so that the inflammation is resolved.*<sup>8</sup>

### **Definition**

- *Luke warm water or decoction of drugs when irrigated from some distance to any organ is called Nutool in Arabic, Tarera or Dhaar in Urdu, and Irrigation in English.*<sup>1,4,9</sup>
- *It is a unique therapy in which medicated oils or decoction of herbs are poured continuously for a predetermined period of time over a specific area of the body.*<sup>4,10,11</sup>
- *Irrigation or pouring of medicated water.*<sup>2,4,9</sup>

- The term *Sukoob* is used synonymously with *Nutool* at some places.<sup>2,4</sup>
- The basic distinction between *Nutool* and *Sukoob* is of the distance from which the drugs are irrigated or dripped. If the liquid is poured from a close distance, the procedure is known as *Sukoob*, and if the distance is increased, it is known as *Nutool*.<sup>7,9</sup>
- Another difference is on the basis of the continuity for which the drugs are dripped. If the drugs are poured intermittently, the procedure is known as *Sukoob*, and if continuously, it is known as *Nutool*.<sup>7,12,13</sup>
- *Hakeem Abul Farah* stated that in contrary to *Sukoob*, in *Nutool* viscous fluid is used but some other *unani* physicians say that *Nutool* means pouring any inviscid liquid from some distance without break in the continuity of stream.<sup>12</sup>

#### Types of *Nutool* therapy<sup>2,3,4,5</sup>

Depending upon the nature of liquid used for desired actions, *Nutool* has been broadly divided into two types:

- [1] *Nutool-e-haar*
- [2] *Nutool-e-baarid*

#### Types of Liquid<sup>2,3,4,5,7,8,9,14,15,16,17</sup>

- Plain water/ Luke warm water
- Milk
- *Khaisanda*
- *Joshanda*
- Oil

#### Objectives of *Nutool* Therapy<sup>2,3,4,7</sup>

*Allama Gilani* describes the aims and objectives of *Nutool* as follows:

- 1 To disperse toxic matter.
- 2 To alter the temperamental state of the body.
- 3 To relieve several chronic diseases, pain and stiffness because of its analgesic effect.
- 4 To cause vasoconstriction, for instance, *Nutool* with cold water may be done on an injury to prevent the development of inflammation. The cold compression advised in modern day medicine for acute inflammations or after surgeries is done for the same reason.
- 5 To give strength to organ and nerves. Those *Nutools* have *baarid* effect.

#### Indications<sup>3,7,12,13,14,16,17</sup>

- *Sudaa'* (Headache)

- *Shaqeeqa* (Migraine)
- *Sarsaam Saudavi* (Meningitis)
- *Sahar* (Insomnia)
- *Malankholia* (Melancholia)
- *Mania waDa-ul-Kalb*
- *Sadrwa Dawar*
- *Ma-ul-Raas* (Hydrocephalous)
- *Nisyan* (Amnesia-complete loss of memory)
- *Faalij* (Paralysis)
- *Sara'* (Epilepsy)
- *Sakta* (Stroke)
- *Waram-e-Masana* (Cystitis)
- *Qoolanj Balghami* (Colitis)
- *Warm-e-sadi* (Mastitis)
- *Aashob-e-chashm* (Conjunctivitis)
- *Iltihab-i-ghisha-ur-riya* (Pleuritis)
- *Safa* (Alopecia)
- *Usr-i-baul* (Dysuria)
- *Hisat-e-Gurda* (Renal stones)
- *Warm-e-raham* (Endometritis)
- *Waja-ul-mafasil*
- Arthralgia

#### MANUAL OF PROCEDURE<sup>2,3,7,12,13,15,17</sup>

- Affected area should be kept uncovered.
- *Nutool* is preferably done in supine position, wherever possible.
- Then medication or oil is poured manually or with the help of newer apparatus available, at the recommended temperature.
- Continuously oil is poured for about 20-45 minutes from a height of approximately hand span or more than that.
- If *Nutoolis* done on the forehead, care should be taken to cover the eyes with sterile gauze to prevent spilling of oil into the eyes.
- The head should be kept straight while doing *Nutool*.
- *Nutool* should be done at some height, so that the organ would be benefitted well by the action of drugs.
- The oil flowing down the head should be collected in a container placed beneath the outlet of the *Nutool* table.

The collected oil should be reused to maintain an uninterrupted flow of oil over head.

#### Mechanism of Action<sup>2,3,4,7,15</sup>

- *Nutool* therapy acts on the *mizaj* of an organ, which has been deviated from normal (*Ta'deel-e-mizaj-e-a'za*).
- Various diseases in *unani* system of medicine are caused by excessive *yaboosat*. *Nutool* therapy produces

*Tarteeb* in the organs, thus removing the causative factor in such diseases.

- Sometimes sleep is necessary for the cure of a disease, *Nutool* therapy produces *Tanveem* by using a *Joshanda* of *Munavvimadvia*.
- Accumulation of *Akhlat-e fasida* (Morbid humours) causes various kind of diseases, *Nutool* therapy is useful in such conditions by its action of *Tahallul*.
- *Sukoon* is an essential factor for life, *Nutool* therapy acts as *Musakkin*.

### Physiological Effects of *Nutool*<sup>2,3,7,15,19</sup>

*Nutool* is very effective mode in regimental therapy for various types of chronic ailments and various lifestyle disorders.<sup>79</sup> *Roghan-e-Banafsha* which is cold and moist in temperament causes softening of brain and relieves headache and produces sleep in patients of *sahar*.<sup>19</sup> With experimentation, research and recent advances in medical sciences the physiological changes induced by *Nutool* therapy have been understood to a greater extent. The process of *tanteel* results in number of effects that include stimulation of different nerve plexus, glands and brain cells<sup>2</sup>. It also induces relaxation similar to that in medication which is reflected by decreased heart rate, bradycardia, lowered sympathetic tone, slowing of alpha waves on EEG, decreased tidal volume and CO<sub>2</sub> excretion.<sup>2,20</sup> Shafia et.al stated that *Nutool* therapy not only treated insomnia but it also helped to reduce the depression of patient. *Nutool* with lukewarm oils are bestowed with *Musakkin e alam* (analgesic), *Mukhaddir* (sedative), *Murattib* (emollient), *Mubarrid* (cold), *Munavvim* (hypnotic) & *Muqawi e dimagh* (brain tonic properties). Uebeba et.al stated that the neuro-physiological mechanism of the effects of irrigation on the psycho-physiological changes may be related to the tactile stimulation of the skin or hair follicles innervated by the first branch of the trigeminal nerves.<sup>19</sup> *Nutool*, if done on forehead has been proven to have psycho-neuro-immunological effects which also leads to anxiolysis. Biochemical changes include suppression of nor adrenaline, decrease of PMN/lymphocyte ratio and alpha receptors which suggest a sympathetic suppression rather than parasympathetic activation.<sup>21</sup> The impulses from the forehead cause a stimulation of the trigeminal nerve and also a somato-autonomic reflexes and changes in levels of various neurotransmitters including serotonin and catecholamine, resulting in sympathetic suppression and

physioimmunologic changes of peripheral circulation and natural killer cell activity.<sup>2,20</sup>

Further studies done on this effect showed that the skin over the forehead is conveyed by the ophthalmic branch of trigeminal nerve to the reticulo-spinal neurons. A small fraction of this causes an immediate motor response and much of the remaining is stored for control of motor activities. Therefore, repeated stimuli are needed for consolidation of this information which needs 5-10 minutes and about one hour for stronger consolidation. This is logic and explanation of carrying out *Nutool* for about 30-45 minutes. Also to achieve the permanent effects of *Nutool*, there must be change in response characteristics of different neuronal pathways, which may be brought about by regular therapy for a fortnight. Regular or continuous pressure input generates continuous impulse to the central nervous system thereby continuously stimulating CNS. Practicing this procedure regularly for 15 days may lead to long lasting stimulation of CNS.<sup>2,20,22</sup> In one research study, it was observed that shirodhara with Dashamoolakwatha (half an hour daily in morning for 21 days) showed highly significant relief on sleeplessness (61.29%), distress (63.64%), sleep time, sleep quality and freshness after awakening (100% each) in patients of stress induced chronic Insomnia. Apart from this, relief in mental health symptoms was observed which was based on Hamilton's Anxiety Rating Scale, Hamilton's Depression Rating Scale, Brief Psychiatry Rating Scale and Manasabhavpariksha on Ayurvedic parameters.<sup>22</sup>

The *Nutool* therapy has been proven to induce a feeling of relaxation. The oils and decoctions in *Nutool* therapy, absorbed through skin, have curative benefits and therapeutic effects are achieved by the use of specific drugs. Many studies have been carried out to know the efficacy of various oils used in *Nutool* therapy. In one such study carried out recently it was observed that *brahmi* oil is beneficial for moderate to severe insomnia.<sup>2,23</sup> In primary insomnia patients, another controlled study on *Nutool* therapy compared the effects of *Nutool* therapy with *roghan-e-banafsha* and *roghan-e-gul*. The results not only showed decrease in severity of insomnia in both groups but it was also observed that the use of both these oils enhanced the efficacy of the therapy significantly as evidenced by the improvement in day-time somnolence, sleep latency, dysfunctioning and mental stress and depression.<sup>2,15</sup>

The effects of *Nutool* therapy are deeply relaxing and bring on a peaceful state mediated by the

brain wave coherence, alpha waves, and a down regulation of the sympathetic outflow. *Nutool Therapy*, by calming imbalances in our mind and

disturbances in our emotions, helps to heal the body at the root level of disease and leaves the person feeling in a heavenly state.<sup>24</sup>

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