NUTOOL THERAPY (IRRIGATION) AND ITS PRACTICAL APPLICATIONS IN UNANI SYSTEM OF MEDICINE

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ABSTRACT
Ilaj bit tadbeer or regimenal therapy is one of the four methods of treatment in Unani system of medicine. The other three being Ilaj bil giza (Dietotherapy), Ilaj bil dawa (Pharmacotherapy) and Ilaj bil yad (surgery). Ilaj bit Tadbeer includes a number of regimenal interventions such as Hijamah (cupping), Irsal alaq (leeching), Hijamah, Fasad (venesection), Dalak (massage), Nutool (irrigation), Qay (Emesis), Idrar-i-Bawl (Diuresis), Tariq (Diaphoresis), Munzij and Mu’shil therapy (Concoction and purgation), Bukhoor (medicated steam), kavy (cauterization), Huqna (enema) etc. Among these regimen Nutool or irrigation is a classical and an effective method in regimenal therapy which refers to pouring or dripping of drugs on specific body parts. For this purpose usually water, oil or medicated decoction is poured from a height over specific sites of body in certain diseases. This process is called Tanteel (irrigation). Depending upon the nature of liquids used for desired actions in this therapy it has been broadly divided into two types; Nutool Haar and Nutool Barid. Nutool or irrigation is done with a purpose of acceleration of process of Ikhraj-e-mawad (evacuation of morbid material) and Ta’dil-i Mizaj-e-Aza (normalization of morbid temperament) and to improve the Quwat-e-Mudafiat (defense mechanism of body), this results in desired neurological, psychological and pharmacological effects in various diseases. It also enhances the local absorption of medicines thus helps in getting the desired action of medicine locally. Nutool is effective in relieving chronic disease, pains and stiffness of various types, as in Waja-ul-mafasil (arthritis), Suddaa (headache), Surra (Epilepsy) Sarsaam (meningitis), Shaqiqah...
(migrane) **Sakta** (stroke), **Bekhwabi** (Insomnia), **Dawar** (vertigo), Mania, **Malancholia** (Melancholia), **Nisyan** (Amnesia), **Ahtibase bol** (retention of urine), **Warm e suddi** (mastitis) and **Warme raham** (endometritis) etc.

**KEYWORDS;** Hijamah, bukhoor, Illaj bit tadbeer, Tanteel, Nutool, Mania.

**INTRODUCTION**

Literally **Tadbeer** is an Arabic word meaning “Regimen” (systemic plan) while as **Illaj** means “therapy” or “treatment”. Therefore **Illaj bit tadbeer (IBT)** is treatment through regimen that is decided according to the nature or pathogenesis of the disease. If patient is having **Sue mizaj** (derangement of temperament), life style modifications; Diet, Sleep, Physical Exercise, climate and intervention such as **Dalak** (Massage), **Hamam** (Turkish Bath), **Inkibab** (Inhalation), etc is done. In patients having diseases of structure (**Sue Tarkeeb**); **Fasd** (Venesection), **Taleeq** (Leeching), **Hijammah** (Cupping), **Kayy** (cauterization), **Qay** (emesis), **Tariq** (Diaphoresis), **Takmeed** (Fomentation), **Mushil** (Purgative), **Mudir** (Diuretic) is given.\[1,2\]

**Illaj bit tadbeer** is a method in which the cure of a sick person and maintenance of general health is performed with the help of certain procedures, and the objective is achieved by elimination (**Tanqiya**) or diverting (**Imala**) of morbid humors and by enhancing the defense mechanism of body. In other words these are the best known “detoxification “methods.\[1\]

Among these methods **Nutool** is a novel method, in which decoction of certain drugs or medicated oils are poured over specific sites of body at certain height in some specific diseases. According to Shiekh bu-Ali Sena **Nutoolat** are also called sakoobat. **Nutoolat** or **tareda** are decoction of medicines or hot water that is poured on desired organs.\[2,3,4\]

**Nutool** is divided into following types according to nature of liquid used.\[5,6\]

**Nutool barid** (Cold irrigation); in it cold water or cold medicated decoction or oil with cold temperament is used e.g. in **Sarsam** (Meningitis) it is poured on head.

**Nutool haar** (Hot irrigation); in it hot water, hot medicated decoction, lukewarm oils or oil with hot temperament are used. It is mainly used in inflammatory conditions as an anti inflammatory (**Muhalil-e-warm**).
Nutool-e-muqawi (Tonic irrigation): It is used mainly to provide nutrition to any weak organ, in its first Haar Nutool and then Barid Nutool is given to improve blood circulation of the organ and acts as a nerve tonic.

Aims and Objectives of Nutool

The objectives of performing Nutool are enumerated below,[1,5,6]

1. To disperse the morbid matter from the affected part (Tahleel-e-mawad); Haar nutool is used.
2. To alter the temperamental state of the organ (Tadeel-e-Mizaj) and as a tonic; Haar and Barid Nutool is used alternately.
3. To relieve pain, for softening of organs and to avoid congestion (Imtalah), as in trauma (Zarba wa Sakta); Barid Nutool is used.
4. To relieve fatigue; Haar Nutool is used.
5. To enhance or increase the blood supply, correct cold temperament or to rectify the temperament of a particular organ; Haar Nutool is used.
6. To relieve chronic diseases like Meningitis (Sarsaam), Paralysis (Falij), Arthiritis (Waja-ul-mafasil), Headache (Sudda), Insomnia (Sahar) and in certain mental disorders; Haar and Barid Nutool is used.
7. As nerve tonic (Muqawi Asaab) in patients of sexual disorders (Zoofa e bah); Haar and Barid Nutool is given alternately.
8. To achieve antispasmodic and detoxifying effect; Barid Nutool is used.

To evacuate waste products through skin; Haar Nutool is used.

Barid Nutool is done for vasoconstriction so that the morbid material does not enter the main circulation. When there is no congestion (Imtilah) Haar Nautool is done.[5]

METHOD

The affected part on which Nutool has to be done should be kept uncovered. It is preferably done in supine position. Oil or other medicated liquids such as Joshanda (decoction of herbs), Khaisanda (infusion), milk, plain water, Luke warm water or Cold water is poured continuously in rhythmic flow onto the forehead or other specific organ from a height (approx.65cm or 0.5ft) for a specific period of 20-30 minutes allowing the oil. If Nutool is done on forehead care should be taken to cover the eyes with sterile gauze to prevent spilling of medication into the eyes.[7,8,9] If any body part is weak due to Sudda (obstruction), or any
problem in a muscle or ligament like any injury or dislocation due to which the organ becomes weak, we should massage that organ with oil (Rogan) so that blood supply is restored and massage with Rogan Banafsha and go for Haar Nutool.\[10\]

**Duration of therapy**
It depends on the chronicity of disease and is gradually tapered off with improvement of sign and symptoms e.g. -7 sittings for first 14 days, alternatively followed by 4 sittings twice weekly for two weeks and then 1 sitting once weekly or adjusting the regimen according to improvement of patient.\[7\]

**Mechanism of action and physiological effects of Nutool**
In the process of Nutool the temperature of the affected part is raised as a result of which the blood circulation increases, the morbid material gets dissolved (Tahleel) and more nutrients reach the organ changing its Mizaj (temperament).\[5\]

*Barid Nutool* is done for vasoconstriction so that the morbid material does not enter the main circulation. When there is no congestion (*Imtilah*) *Haar Natool* is done.\[5\]

With experimentation, research and recent advances in medical sciences the physiological changes induced by nutool therapy have been understood to a greater extend. The process of *tanteel* results in number of effects that include stimulation of different nerve plexus, glands and brain cells;\[12\] 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 CO2 excretion.\[13\] *Nutool*, if done on forehead has been proven to have psychoneuroimmunological effects which also leads to anxiolysis. Biochemical changes include suppression of noradrenaline, decrease of PMN/lymphocyte ratio and alpha receptors which suggest a sympathetic suppression rather than parasympathetic activation. 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.\[14\]

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 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.\textsuperscript{[12]}

The Nutool therapy has been proven to induce a feeling of relaxation. The oils and decoction in Nutool therapy absorbed through, skin have curative benefits and therapeutic uses 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 Lavender oil has a better and more potent anxiolytic effects when dripped on forehead as compared to plain sesame oil. It was believed to be due to presence of relaxing essential oils in lavender.\textsuperscript{[15]} In primary insomnia patients, another controlled study on Nutool therapy compared the effects of Nutool therapy with rogan-e-banafsha and rogan-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.\textsuperscript{[8]}

Management of different diseases by Nutool as an adjuvant therapy

1. \textit{Sudda-e-barid} or Balgami (Phlegmatic headache), \textit{Duwar wa subat} (vertigo and comma); Nutool of following drugs in equal quantity are recommended; Maticaria chamomilli (\textit{Baboona}) Trigonella uncata (\textit{Akleelul Mulk}), leaves Anethum sowa (\textit{Barge garshabt}), Artimisia vulgaris (\textit{Baranjasif}). Lavendula stoechas (\textit{Ustukhudus}), Artimisia maritime (\textit{Darrmuna turki}), Origanum majorana (\textit{Marzan josh}), Mellisa officinalis (\textit{Badranj boya}). Curcuma longa (\textit{laung}), Mentha piperita (\textit{Pudina dushti}), Zataria multiflora (\textit{Satar farsi}), red earth (\textit{Shah Armani}).\textsuperscript{[4]}

2. \textit{Sudda-e-har, sehar} (Choleric headache, Insomnia); Oil of Rosa domestica (\textit{Rogan gulab}), vinegar (\textit{Sirka}) and Rosa domestica (\textit{Gul surakh}) are used.\textsuperscript{[11]}

3. Alcoholic headache \textit{Sudah khumari}; Rosa domestica (\textit{Gulab}), Vinegar derived from Vitis vinifera (\textit{Sirka angoori}) are mixed together and Nutool is done.\textsuperscript{[4]}
4. *Sakta* (shock); *Origanum majorana* (Marzangosh), *Anethum sowa* (*Soya*), citrus medica *vartydica* (*Barg-e-utraj*), *Zatoria multiflora* (*Satar*), *Maticaria chamomilli* (*Baboona*), *Trigonella uncata* (*Aklelal mulk*), *Mentha piperita* (*Pudina*), *Ruta graveolans* (*sudaab*) and *Thymus vulgaris* (*Hasha*) are taken in equal quantity for *Nutool*.\[4\]

5. *Warm-e-suddi* (Mastitis); *Vinegar* (*sirka*) with hot water natool is done. Following drugs are also used in mastitis in equal amount after boiling them in equal quantity; *Maticaria chamomilli* (*Baboona*), seeds of *Anethum sowa* (*Tukhm Soya*), *Trigonella foenum* (Hulbah) and *Castor canadensis* (Jund be daster).\[4\]

6. *Warm-e-raham* (Endometritis); *Anethum sowa* (*Soya*), *Brassica oleracae* (*Kirme Kula*), *Althea officianalis* (*Khatmi*), *Violo odorata* (*Banafsha*), *Maticaria chamomilli* (*Baboona*), *Origanum majorana* (Marzanjosh) are taken in equal quantity for *Nutool*.\[4\]

7. *Waja ul mafasil* (Arthritis); *Cuscuta reflexa* (Akashbael) and *Solanum nigrum* (*Makoox khushk*) are used for *Nutool*, followed by massage with *Roghan gul* or *Roghan hina* mixed with powdered *Juniperus communis* (*Abhal khushk*).\[4\]

8. *Sarsam haar* (meningitis) and *Sehar* (Insomnia); following drugs are used for natool in equal quantity; *Violo odorata* (*Gul-e-Banafsha*), *Lactuca sativa* (*Tukhm-e-kahu*), *Rosa domestic* (*Gul Surkh*), *Maticaria chamomilli* (*Gul-e-baboona*), *Papaver soniferum* (*Post-e-khashkhash*).\[4\]

9. *Shaqiqa har* (migraine); After expelling the disease –causing matter, *Papaver somniferum* (*khashkhash*), *viola odorata* (*banafsha*) and wheat husk decoction is used as nutool on head.\[16\]

10. *Melancholia*; For expulsion of saudavi matter and correction of temperament of brain drugs like *Anethum sowa* (*shibt*), *Iris florentina* (*sosan*), *Maticaria chamomilli* (*babuna*), and *Trigonella uncata* (nakhuna) are used\[17\]

11. *Nisyan* (Amnesia); *Maticaria chamomilli* (*Baboona*), *Trigonella uncata* (nakhuna) *Althea officinalis* (Khatmi), or its leaves *barg-e khatmi*, *Canthamus tictorious* (qurtum kofta) can be used as decoction for nutool after massaging the scalp continuously with a soft object.\[18\]

12. *Mania*; Dried and fresh *banafsha*, *sapistan*, grinded *jaw*, wheat husk, *rose*, *Murraya paniculata* leaves (*barg-e kamni*), *bagr-e isapghol* or *barg-e khubazi* are boiled and poured over soft palate so that the effect reaches the brain.\[18\]

13. *Sura* (Epilepsy); *Maticaria chamomilli* (*babuna*) and *Trigonella uncata* (nakhuna), *Origanum majorana* (Marzanjosh) are used as nutool on head.\[16\]
14. Faliq (Paralysis); 35gms of rose oil are added to 450gms of water and this mixture is heated on slow flame till the vinegar is burnt off. The mixture is strained and used for nutool on head.[18]

15. Renal disorders (Amraz kuliya wa Masana): Retention of urine (Ahtibas-e-bowl); Tribulus terrestris (Gokhuru), Maticaria chamomilli (Baboona), Althea officinalis (Khatmi), Anethum sowa (Soya), Apium graveolens (Tukhm e karafs), Trigonellum foenum (Meethi), Carthamus tinctorius (Tukhm-e-kad), Root of Capparis spinosa (Beekh Kibr), Violo odorata (Banafsha), leaves of Portulaca oleracea (Khurfah ), Brassica oleraceae (Kirm-e-kula) are used for Nutool.[4]

16. Reproductive disease (Amraz-e-tanasal) such as Orchitis (Warm-e-Khusya); Dry Mentha arvensis (Naena), Origanum majorana (Marzangosh), Solanum nigrum (Makoh) are used in equal quantity for Nutool.[4]

17. Suda reehi; Nutool of shayah (dardmuna), baranjasif, satar, nakhooana, karafs, soya and marzangosh is given.

CONCLUSION

Nutool is very effective method of treatment in regimental therapy for various disorders and complications as documented in classical unani literature. This technique and regimen is cost effective, easy to administer, relaxing, safe and without possible side-effects as compared to oral medication. The clinical studies done to evaluate the efficacy of this therapy has shown very promising results owing to its calm relaxing and holistic nature besides providing physical and psychological benefits. Therefore to make this patient friendly regimen more useful in the present times of physical, neurological and psychological crisis further research on therapeutic evaluation on scientific parameters is needed. Also the detailed research on the efficacy of compound Unani formulations used in this therapy need to be carried out.

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CONFLICT OF INTEREST
REFERENCES


