

HEALING PROSPECTS OF NATUL THERAPY (IRRIGATION): INTEGRATING
TRADITIONAL UNANI PRACTICE WITH MODERN SCIENTIFIC INSIGHTSShamama Usmani^{1*}, Asia Sultana² and Fakhara Khan³¹Junior Research Fellow, Department of Ilaj-Bit-Tadbeer, Faculty of Unani Medicine, AMU, Aligarh.²Professor, Department of Ilaj-Bit-Tadbeer, Faculty of Unani Medicine, AMU, Aligarh.³Research Scholar, Department of Jarahat, Faculty of Unani Medicine, AMU, Aligarh.

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ABSTRACT

Naṭūl is a classical regimenal therapy in Unani medicine that involves the continuous pouring of medicated liquids—such as oils, herbal decoctions, milk, or water—over specific body parts from a controlled height, temperature, and flow rate. Closely aligned with the Ayurvedic practice of Shirodhara, Naṭūl has been traditionally employed in the treatment of neurobehavioral, psychosomatic, gynecological, and musculoskeletal conditions. This review draws from classical Unani texts, including the foundational writings of Ibn Sīnā and Ismā'īl Jurjānī, as well as contemporary scientific studies, to examine the principles, indications, physiological mechanisms, and modern advancements related to Naṭūl therapy. Classical sources describe Naṭūl as effective in resolving inflammations (Taḥlīl-i-Awrām), correcting abnormal temperaments (Ta'dīl-i-Sū'-i-Mizāj), strengthening organs (Taḥwīyat-i-A'dā'), and enhancing localized drug absorption. Scientific investigations into Naṭūl-e-Ra's (cranial irrigation) suggest its role in modulating psycho-neuroimmunological responses, including bradycardia, reduced sympathetic tone, neurotransmitter regulation (e.g., serotonin, dopamine, adrenaline), and improved peripheral circulation—likely mediated by stimulation of the trigeminal nerve and somato-autonomic pathways. Localized applications (Naṭūl-i-Maqāmī), depending on the temperature of the liquid, induce either vasodilation or vasoconstriction, offering targeted therapeutic benefits. Recent innovations, particularly the development of electro-thermal Naṭūl apparatus, have improved the safety, precision, and reproducibility of this ancient practice. These advancements support the integration of Naṭūl into evidence-based, personalized, and integrative healthcare models.

KEYWORDS: Naṭūl, Unani medicine, Shirodhara, neurobehavioral disorders, psychosomatic therapy, traditional medicine.

INTRODUCTION

Naṭūl is a classical and novel regimen in which a liquid such as medicated oil, decoctions of specific herbs, milk, or even plain water—is poured in a continuous stream from a certain height onto a targeted area for a specific duration and at a recommended temperature. According to World Health Organization (WHO) international standard terminologies on Unani medicine Naṭūl is defined as medicinal liquid preparation poured on affected part with force. In classical Unani literature, it is primarily indicated for neurobehavioral and psychosomatic disorders, as it induces a tranquil state of awareness that promotes a dynamic psychosomatic balance.^[1-5]

The aim of this paper is to highlight a historically significant but often overlooked therapeutic regimen within *Ilāj-bi't-Tadbīr* (Regimenal therapy), by examining its classical indications and aligning them

with modern scientific understanding. By doing so, it intends to inspire young researchers to develop structured clinical data, establish evidence-based practices, and formulate standardized operating procedures for this time-tested and meritorious treatment modality.

METHODOLOGY

A comprehensive review of classical Unani texts including seminal works by Ibn Sīnā and Ismā'īl Jurjānī alongside contemporary scientific research, was undertaken to evaluate the physiological and pharmacological effects of Naṭūl. The procedural framework and the design of the modern Naṭūl apparatus were also critically analyzed. In addition, a systematic literature search was conducted through PubMed, MEDLINE, and Google Scholar using keywords such as *Nutool*, *Natul*, *Shirodhara*, *regimenal therapies*, *Unani medicine*, and *Ilāj bit Tadbīr*. Clinical trials published in

peer-reviewed journals were included, while classical references were sourced from authoritative Unani texts authored by renowned scholars.

Historical background

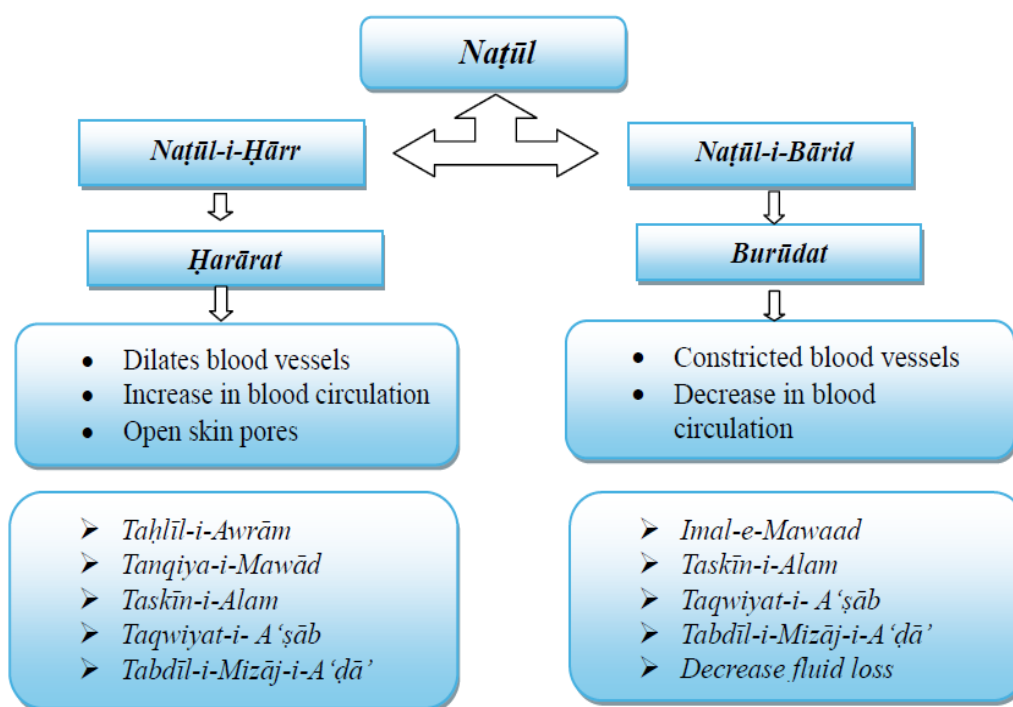
In Unani literature, *Naṭūl* is an Arabic term, and its process is referred to as Tanteel (Irrigation). In Urdu, it is also known as Tarera or Dha'ar, while in English, it is translated simply as Irrigation.^[3,4] Interestingly, this therapeutic procedure is also documented in classical Ayurvedic literature, where it is known as Shirodhara—a Sanskrit term derived from *Shiro* (head) and *Dhara* (flow).^[5]

In Unani medical literature, particularly in the works of Ibn Sīnā (Avicenna), *Naṭūl* is described as a versatile therapeutic intervention with a wide range of applications. It is traditionally employed for the resolution of inflammations (*Taḥlīl-i-Awrām*), correction of morbid temperament (*Ta'dīl-i-Sū'i-i-Mizāj*), alteration of temperament (*Tabdīl-i-Mizāj*), and strengthening of bodily organs (*Taqwīyat-i-A'dā'*).^[4] Ismā'īl Jurjānī, another esteemed Unani scholar, emphasized the *Musakkin* (sedative) effects of *Naṭūl*, especially when prepared with sedative agents like *Khashkash* (poppy seeds).^[8] When used in conjunction with *Muḥallil Adwīya* (resolvent drugs), *Naṭūl* becomes particularly effective in promoting the resolution of inflammations.

Additionally, this therapy is indicated for the evacuation of morbid materials (*Tanqīya-i-Mawād*), diversion of morbid matter (*Imāla-i-Mawād*), further strengthening of organs (*Muqawwī-i-A'dā'*), and normalization of diseased organ temperament (*Tabdīl-i-Mizāj-i-A'dā'*).^[9-11] These therapeutic actions reflect *Naṭūl*'s comprehensive influence on neurological, psychological, and pharmacological aspects of disease. Notably, the therapy also enhances local absorption of medicinal substances, thereby enabling precise, site-specific therapeutic outcomes. This multifaceted approach demonstrates *Naṭūl*'s continued relevance in the integrative management of diverse health conditions.

Naṭūl is divided into following types according to nature of liquid used

1. ***Naṭūl-i-Bārid* (Cold irrigation):** Pouring of cold temperament liquid are used e.g. in *Sarsam* (Meningitis) it is poured on head.
2. ***Naṭūl-i-Ḥār* (Hot irrigation):** Pouring of hot temperament liquid are used. It is mainly used in inflammatory conditions as an anti-inflammatory (*Taḥlīl-i-Awrām*)
3. ***Naṭūl-i-Muqawwī* (Tonic irrigation):** It is used mainly to provide nutrition to any weak organ, in its first *Ḥār* *Naṭūl* and then *Bārid* *Naṭūl* is given to improve blood circulation of the organ and acts as a nerve tonic as in sexual disorder (*Ḍu'f al-Bāh*).^[12,12]



Mechanism of action of *naṭūl* therapy

Naṭūl apparatus

Naṭūl Apparatus is a highly sophisticated, electro-thermally controlled device designed to operate on the principle of classical *Naṭūl* Therapy. The apparatus consists of flow-controlled thermostatic oil baths and a

medicine recirculation tank. Both components are double-walled, with the outer body made of powder-coated mild steel and the inner heating vessel made of stainless steel to prevent contamination and preserve the medicinal properties of the drugs used. It operates on a

220V, single-phase power supply. The flow is regulated by an adjustable brass flow-control valve, allowing for either drop-wise or continuous application of medicine to the targeted area. The medicinal recirculation system functions by collecting the used medicinal oil in a vessel placed beneath the point of application. This vessel is connected to a gear pump that recirculates the oil back to the oil bath.

The apparatus is mounted on a frame structure made of heavy, powder-coated 30mm mild steel square tubes. The

vertical member of the frame allows vertical movement of the horizontal arm, which holds the oil bath. The horizontal arm can also move forward and backward, enabling the oil bath to be positioned precisely in both the XX' and ZZ' directions, depending on the therapeutic requirement. The control panel includes a thermostat for presetting the desired temperature, a neon power indicator, sockets, switches, and a main supply lead. It is mounted on the vertical frame in such a way that it does not interfere with the vertical movement of the thermostatic oil bath.



Picture 1: Naṭūl apparatus with bed.



Picture 2: Naṭūl therapy.

Procedure of therapy^[2,6]

Pre-procedure care

1. Vitals (Blood pressure, Oxygen Saturation and Pulse rate) should be recorded prior to the procedure.
2. The patient should be asked to lie in a supine/prone/left or right lateral position on the Naṭūl table as required for the access of the target area for the procedure.
3. The target area for Naṭūl should be sufficiently exposed and kept underneath the opening of the valve from which liquid is to be dripped at recommended height while other body parts remain covered.
4. The recommended amount of liquid (water, oil, or decoction) of recommended temperature is poured into the Natal vessel container of machine.
5. The eyes are covered with ice pack to abstain from spilling oil into them for safety purposes while doing Natal on the forehead.

Procedure

1. The whole procedure is explained to the patient and reassured of safety.
2. By controlling valve of machine liquid will be poured with continuous stream on the targeted site at a recommended height of about 0.5 ft for given duration of time which is between 15-45 minutes.
3. The used liquid will be collected in recirculation container which is beneath the point of application for target area is placed and the liquid can be reused on the same patient.
4. Therapy should be stopped if any side effect is observed.

Post-procedure care

1. After Naṭūl, the oil or decoction is wiped off from the targeted body part.
2. The patient is kept under observation for 15 minutes after therapy.

Indications^[2,8-11]

Amrāḍ-i-Ra's-o-Nizām-i-A'sābo-Dimāgh (Central Nervous System disorders)	Ṣudā'Bārid (Phlegmatic headache), Duwār (vertigo), Subāt(coma), Ṣudā'Hārr (Choleric headache), Sahar (Insomnia), Sakta (shock), Ṣudā'Khumārī (Alcoholic headache), / Sarsām (meningitis), Falij (Paralysis), Nisyān(Amnesia), Ṣar'(Epilepsy).
Amrāḍ-i-Nafsānī (Psychosomatic disorders)	Māniyā, Mālankhūliyā, Anxiety, Depression
Amrāḍ-i-Niswān-o-Qabālāt (Gynecological & Obstetrics disorders)	Waram al-Thady (Mastitis), Waram al Raḥim (Metritis).

Amrāḍ-i-‘Izām-o-Mafāṣil (Bones and joints disorders)	Waja‘al-Mafāṣil (Arthritis)
Amrāḍ-i-Nizām-i-Bawl (Urinary System disorders)	Iḥtibās al-Bawl (Retention of urine), Waram al-Mathāna (Cystitis), Ḥaṣā wa al-Kulya (Renal Stone), Ḥaṣā al-Mathāna (Vesicular Stone), Waja‘al-Kulya (Renal Pain)
Amrāḍ-i-Nizām-i-Tānāsul (Reproductive disease)	Waramal-Khuṣyatayn (Orchitis), Ḍu‘f al-Bāh (sexual debility).

DISCUSSION

Naṭūl therapy, as described in classical Unani literature, represents a distinctive convergence of traditional healing practices and emerging physiological insights. Its continued relevance, particularly in the treatment of neurobehavioral, psychosomatic, and inflammatory disorders, reflects the holistic framework of Unani medicine, which emphasizes the balance of humors and the correction of abnormal temperament (*Sū‘-i-Mizāj*).^[9-12]

Recent advancements in medical science have provided deeper insights into the physiological mechanisms influenced by Naṭūl therapy. Though seemingly simple pouring liquid from a certain height this practice induces biophysical changes in the targeted area with notable therapeutic outcomes.

When applied to the forehead (*Naṭūl-e-Ra‘as*), the therapy is believed to exert psycho-neuroimmunological effects. These are thought to result from micro-vibrations of the skull, which stimulate nerve plexuses, glands, and brain regions. Clinically, this is manifested in sensations of relaxation and anxiolysis, similar to those produced by meditation. Documented physiological responses include bradycardia, reduced sympathetic tone, slowed alpha wave activity on EEG, decreased tidal volume, and lower CO₂ exhalation.^[6,23]

Biochemically, Naṭūl has been associated with modulations in neurotransmitter levels—such as noradrenaline, adrenaline, serotonin, and dopamine. Additional markers, like decreased PMN/lymphocyte ratio and reduced alpha-receptor activity, point toward sympathetic suppression, rather than simple parasympathetic activation.^[8-11,23]

The therapy initiates impulses through the trigeminal nerve, particularly via its ophthalmic branch, triggering somato-autonomic reflexes and immune modulation. These impulses reach the reticulospinal neurons, where a small fraction generates immediate motor responses, and the remainder is stored for future regulation of motor function. This mechanism supports the traditional recommendation of performing Naṭūl for approximately 45 minutes to allow sufficient neural consolidation requiring at least 5–10 minutes for minimal effect and about an hour for deeper, lasting impacts.^[13-22]

Naṭūl-i-Maqāmī, or localized application, is a therapeutic technique in which medicated liquids are poured directly

over the affected body part. The temperature of the liquid plays a crucial role in determining its therapeutic effect. Hot liquids promote vasodilation, which enhances blood circulation, improves nutrient delivery, and facilitates the removal of toxins. This action helps reduce inflammation, stiffness, and pain, particularly in musculoskeletal and joint disorders. In contrast, cold liquids cause vasoconstriction, which reduces superficial blood flow and redirects circulation to deeper tissues. This effect is beneficial in relieving swelling and acute pain.^[2,8-12]

Modern technological enhancements—such as thermostatic control, adjustable flow mechanisms, and recirculation systems have improved the precision, safety, and reproducibility of Naṭūl, marking progress toward its clinical standardization. These innovations enable consistent application, making it possible to integrate traditional practices into scientifically grounded therapeutic settings.^[6,12]

Nevertheless, further clinical trials and comparative studies are needed to establish evidence-based protocols, determine long-term outcomes, and benchmark Naṭūl against conventional treatments. Additionally, its synergistic potential with pharmacological therapies merits exploration, especially for chronic and psychosomatic illnesses.^[16-18]

Regular application over two weeks has been shown to induce neuroplastic changes, modifying neuronal response characteristics and contributing to lasting central nervous system (CNS) stimulation. Repeated stimuli generate persistent neural impulses, reinforcing CNS activation and resulting in enduring therapeutic benefits.^[19-21]

In conclusion, Naṭūl is a historically validated and scientifically promising therapeutic modality. With increasing empirical support and modern refinement, it holds significant potential as a complementary approach in integrative medicine—particularly in conditions where stress, neuroendocrine dysregulation, and inflammation play central roles.

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