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Unani Medicine

A Comprehensive *Unani* Perspective on Cholera (*Haiza*)

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Abstract | **Review Article**

Cholera, a life-threatening diarrhoeal disease caused by Vibrio cholerae, remains a major public health concern in low-resource settings. In the *Unani* system of medicine, cholera referred to as *Haiza* is recognized as a severe and acute intestinal illness primarily caused by indigestion or the consumption of contaminated or spoiled food. The disease manifests through the expulsion of toxic substances via vomiting and diarrhoea, with the dominant humor - *safrawi* (bilious) or *balghami* (phlegmatic) determining the route of elimination. *Unani* scholars identify poor dietary habits, excessive food intake, and environmental contamination as key causes, with outbreaks commonly occurring during summer and autumn. Clinical symptoms include foul-smelling watery stools, vomiting, dehydration, weak pulse, and spasms. This paper presents an integrative analysis combining contemporary biomedical insights with traditional *Unani* medical interpretations. We explore the aetiology, clinical manifestations, and epidemiological determinants of cholera, alongside a detailed exposition of *Unani* concepts of *Haiza*, including causation, symptomatology, and classical treatments. The synthesis highlights the potential of integrative models in understanding and managing epidemic diseases within socio-cultural contexts and applicability of antient *unani* approach in recent time.

Keywords: Cholera, *Haiza, Unani* Medicine, Vibrio cholerae, Humoral Theory

INTRODUCTION

Cholera is an acute gastrointestinal infection caused by *Vibrio cholerae*, a gram-negative, facultative anaerobe. Transmission primarily occurs via fecal contamination of water and food, especially in environments with inadequate sanitation. The disease is marked by sudden onset of painless, profuse, watery diarrhoea, often described as "rice-water stools," followed by vomiting, muscle cramps, rapid fluid loss, and severe dehydration. If untreated, it can progress to hypovolemic shock, metabolic acidosis, renal failure, and death. Case fatality rates can reach 30%–40% in severe outbreaks without prompt intervention [1-4].

In classical *Unani* medicine, cholera referred to as *Haiza* is described as a severe, acute intestinal disorder primarily caused by indigestion and the consumption of spoiled or contaminated food. The disease is characterized by the expulsion of toxic matter through successive episodes of vomiting and diarrhoea, with the mode of expulsion varying based on the dominant humor (*safrawi* or *balghami*). Cholera is acknowledged in *Unani* texts as a dangerous and highly contagious disease, particularly prevalent during summer and autumn months.

Unani scholars attribute its aetiology to excessive food intake, improper dietary practices, and ingestion of contaminated items. Environmental factors, such as polluted water and food, along with seasonal variations, significantly influence its outbreak. Clinically, *Haiza* typically begins with bilious diarrhoea and may progress to profuse, foul-smelling, watery stools, often accompanied by vomiting, weak pulse, spasms, and dehydration—potentially leading to death if untreated.

Therapeutically, *Unani* physicians emphasize the expulsion of morbid matter in the initial stages using emetics and discourage premature suppression of diarrhoea. Subsequent treatment focuses on restoring humoral balance and supporting the body's innate healing force (*Tabiyat*). Remedies such as *Qurse Kundur*, *Rubbe Anar*, and *Maul Laham* (meat broth) are

administered based on symptom severity. Adjunct therapies include warm baths (*Hammam*), topical applications (*Zimad*, *Tila*), cupping (*Hijama*), massage, hydrotherapy (*Nutool*), and environmental regulation to enhance patient comfort.

Dietary regimens emphasize light, easily digestible foods and controlled fasting, while sleep is regarded as a key component of convalescence. The *Unani* approach reflects a comprehensive understanding of disease rooted in humoral theory, offering a holistic framework for the management of cholera through a balance of detoxification, nourishment, and rest.

Historical Background:

Cholera, a deadly waterborne disease, has caused seven major pandemics. These pandemics reveal the interplay of disease, geopolitics, and public health in world history.

First Cholera Pandemic (1817–1824)

Originating in Bengal, India, the first pandemic spread through the Ganges delta, reaching Bombay (1818), Southeast Asia (1820), China and Japan (1821), the Persian Gulf and Transcaucasia (1822), and Astrakhan in Russia (1823). It ended by 1824. Mortality was severe: Bangkok recorded 30,000 deaths in 1820, and over 125,000 died in Java in 1821 [5].

Second Cholera Pandemic (1827–1835)

Also starting in Bengal (1827), cholera spread to Afghanistan, Persia, and Russia by 1829–30, then across Europe, reaching Berlin, Vienna, Paris, and England in 1831–32. It crossed the Atlantic to North and South America by 1833. Pilgrimages spread it to the Middle East and Africa. Cairo lost 36,000 lives; Paris saw 18,000 deaths; Mecca and Medina suffered 12,000–30,000 deaths; and New Orleans reported 5,000 [5].

Third Cholera Pandemic (1839–1858)

Emerging again in Bengal, this pandemic was the deadliest. It spread to Southeast Asia, China, the Middle East, Europe, the Americas, and Japan. Mecca lost 15,000 in 1846; Paris 20,000 in 1849; Puerto Rico 25,900 in 1855; and Cuba up to 34,000. England and France reported over 60,000 deaths during 1848–49 [5].

Fourth Cholera Pandemic (1863–1875)

Beginning in India, it spread globally via pilgrim and sea routes. A major outbreak in Mecca (1865) killed 15,000 out of 90,000 pilgrims. Egypt lost 60,000 lives the same year. Cholera reached Europe, America, and Africa. In 1867, 3 million gathered at the Ganges, with 250,000 infected and half dying [5].

Fifth Cholera Pandemic (1881–1896)

This wave began in India and affected Europe, the Middle East, and Asia. Manila lost 10% of its population in 1882. Mecca saw 13,400 deaths in 1883. Egypt lost 58,000 people. Spain, Japan, and the Philippines were also heavily affected, with tens of thousands of fatalities [5].

Sixth Cholera Pandemic (1899–1923)

Starting in Bengal, it spread across Asia, the Middle East, and Europe. In India alone, around 8 million died between 1900–1920. Severe outbreaks occurred in the Philippines (31% mortality in 1902), Tehran (13,000 deaths in 1904), and Java (60,000 deaths in 1909–10). Cholera persisted through WWI and the Russian Civil War [5].

Seventh Cholera Pandemic (1961–1995)

Beginning in Indonesia (1961), it spread to Southeast Asia, the Middle East, and Africa. By 1971, it reached East and Southwest Africa, and Europe. A major wave hit the Americas in 1991, with 391,000 cases reported. By 1995, cholera became endemic in parts of the world, with over 300,000 cases declining annually [5].

Impact of the Cholera Pandemics

The cholera pandemics had devastating and wide-ranging impacts across the globe medically, socially, economically, and politically.

1. Human Toll: Each pandemic resulted in massive loss of life. Although precise global mortality figures are difficult to calculate.

2. Social and Religious Disruption:

- Cholera hit during major religious gatherings such as the Hajj pilgrimage and Kumbh Mela, leading to mass panic and abandonment of religious traditions.
- Social stigma and fear of cholera led to quarantines, isolation of the sick, and even riots in places like Russia and England.
- The disease disproportionately affected the poor, who lived in overcrowded and unsanitary conditions, increasing social inequality.

3. Economic Consequences:

- Trade and travel ban during outbreaks disrupted global commerce and local economies, particularly port cities like Bombay, Hamburg, and New York.
- Governments invested heavily in sanitation and public health infrastructure in response to repeated epidemics.
- Agricultural productivity fell in regions affected by mass deaths, including India, Russia, and parts of Africa.

4. Public Health Reforms:

- Cholera pandemics were instrumental in the development of modern public health systems.
- Pioneering work by figures like John Snow in London during the Third Pandemic helped

establish the germ theory and link between contaminated water and disease.
- Massive investments were made in water sanitation, sewer systems, and urban planning especially in Europe and North America.

5. Political and Colonial Implications:
- Colonial administrations (especially British India) were heavily criticized for poor health responses, intensifying anti-colonial sentiment.
- Epidemics exposed weaknesses in governance and often led to state intervention in public health, sanitation laws, and border control.
- The spread through military and pilgrim routes highlighted the role of imperial and religious networks in disease transmission.

6. Scientific and Medical Advances:
- Repeated pandemics led to research into cholera's aetiology, eventually identifying *Vibrio cholerae* as the causative agent.
- Efforts to develop vaccines and treatment methods (like oral rehydration therapy) improved over time, especially after the Sixth Pandemic.
- Understanding of epidemiology improved significantly, setting the foundation for modern disease surveillance.

The two serogroups chiefly responsible for epidemic cholera are *Vibrio cholerae* O1 and O139. The classical biotype was first identified by Robert Koch in 1883 during an Egyptian outbreak. In 1905, a distinct biotype El Tor was isolated from Meccan pilgrims in a quarantine facility located in El Tor, a region named after the Arabic Mountain Tor Sina (mentioned in the Quran) [3,6].

UNANI PERSPECTIVE

In classical Unani texts, cholera referred to as *Haiza* is believed to result from indigestion and the consumption of spoiled or harmful food [7,8]. It is considered a severe and acute intestinal illness. In this condition, toxic substances are expelled from the body through both vomiting and diarrhoea, occurring in succession [9]. *Haiza* is recognized as a dangerous and highly contagious disease that often spreads in the form of an epidemic [10].

According to *Unani* principles, if the undigested food is of a bilious (*safrawi*) nature, it is expelled primarily through vomiting. However, if it is phlegmatic (*balghami*) nature, the harmful matter is eliminated through the intestinal tract as diarrhoea [9].

Aetiology: In the USM this disease occurs due to indigestion or spoiled food. Sometimes by eating watery fruits after meals, especially melons [9]. There are three important causes
- Excess quantity of food
- Unordered practices of foods
- Consumption of contaminated foods [9]

Host Factors: Cholera most commonly affects young children, particularly during the summer and autumn seasons [7,8,11,12].

Environmental Factors: Cholera outbreaks are more common in the summer and autumn, with diarrhoeal illnesses during the autumn often being particularly severe. The disease is rarely seen in winter and spring [7,8,12].

Clinical Features:

Cholera typically begins with bilious diarrhoea, which soon progresses to profuse, foul-smelling watery stools. In some cases, the stool resembles the appearance of water used to wash fresh meat pale, reddish, and thin in consistency with a greasy or fatty odour. Occasionally, the diarrhoea may contain fragments of the intestinal mucous membrane, giving it a more severe and alarming presentation [12].

Initially, the patient passes bilious stools, followed by copious watery diarrhoea, sometimes mixed with mucosal shreds. A weak or thready pulse may be observed, often accompanied by spasms, and if left untreated, the condition may rapidly lead to death [11]. Depending on the temperament of the undigested material, symptoms vary:
- *Safrawi*: expelled via vomiting
- *Balghami*: expelled via diarrhoea [9].

Pulse:

In cholera, the pulse (*nabz*) is typically small and light (weak and thready) [7,8]. A notable warning sign of impending death includes a weak or disappearing pulse accompanied by full-body spasms and cold sweating. This relaxation or irregularity in the pulse tone is considered a critical and ominous symptom [12].

Treatment:

Cholera is recognized as a gastrointestinal illness caused by the ingestion of contaminated food or water. Therefore, it is crucial to expel the harmful substances from the gastrointestinal tract through vomiting or diarrhoea. In line with this understanding, *Unani* physicians strongly advised against suppressing diarrhoea in the early stages. Instead, they recommended the use of emetics to purge the toxic material from the body—up to the point where the excess is eliminated and fluid loss becomes significant. After the elimination phase, the focus shifts to supporting the body's natural healing force (*Tabiyat*) and managing symptoms [13,14]. If the patient experiences relief after diarrhoea and repeated vomiting, a warm bath (*Hammam*) is recommended, followed by the intake of light, easily digestible food and rest to promote recovery [15].

Use of Emetics and Antiemetics:

In the early stages, when severe symptoms are absent, simple gastric cleansing is usually sufficient. The stomach should be cleansed using hot water, as hot water itself acts as a mild emetic. Once the stomach is fully cleared, nausea and vomiting typically subside on their own. During this phase, the use of laxatives and oily substances is strictly discouraged, as they may further weaken the stomach's natural strength (Quwate Meda) [7,8]. However, if vomiting and diarrhoea become excessive and severe symptoms develop, there is no need to be panic prompt treatment should be initiated. The recommended remedies include *Qurse Kundur*, ice-cold water, and *Rubbe Anar*. If the patient vomits after administration, these should be given again as needed [15].

In cases of persistent and severe vomiting, the patient should be given foods that are light, fast-digesting, and easily assimilated. One such preparation is *Maul Laham*—a meat broth made from young goat (*halwan*) or lamb—mixed with pomegranate juice and *Aabe Behi*. Additionally, the patient should chew *Kundur* (olibanum) and *Gile Khorasani Nishapuri* (a special clay found in the region of Nishapur, known for its medicinal use and cooling properties, often grown near camphor). This regimen should be continued until the vomiting ceases. Once the symptoms stabilize and the patient is at ease, it is essential to encourage rest and sleep to support recovery [7,8,15].

Prescription of Qurse Kundur (Antiemetic Formulation): There are two preparations, varies in their ingredients are mentioned as follows;

Formulation (Nuskha) 1: This preparation is used as an effective antiemetic. Ingredients are:

- *Kundur* (Olibanum) – 30 grams
- *Gile Khorasani* – 30 grams
- *Kabab Chini* (Cubebs) – 4.5 grams
- *Ilaichi Dana* (Cardamom Pods) – 4.5 grams
- *Kafoor* (Camphor)– as required
- *Musk* – as required
- *Qarnfal/Laung* (Dry Clove) – as required

Sieve all the ingredients finely and mix thoroughly. Form tablets weighing approximately 4.25 grams each. Administer one tablet to the patient as needed [7,8].

Formulation 2: This alternative formulation is also highly beneficial for controlling vomiting, ingredients are:

- *Kundur* – 35 grams
- *Teen Khorasani* – 35 grams
- *Kabab Chini* – 9 grams
- *Ilaichi* – 9 grams
- *Kafoor* – 500 mg
- *Qarnfal* – 500 mg

Grind all ingredients finely and mix well. Prepare tablets weighing approximately 4.5 grams each. These tablets are highly effective in relieving nausea and vomiting [16].

***Nuskha Rubbe Anar Tursh*:** Extract the juice of sour pomegranates and allow it to settle until it becomes clear. Once clarified, boil the juice and collect the upper layer. Continue boiling until the mixture reaches the consistency of *Sharbate Gulab* (rose syrup). While it is still warm, add 24 grams of mint water (*Arqe Pudina*). Once the preparation cools down, store it for future use. *Rubbe Behi* (quince extract) and *Rubbe Seb* (apple extract) are prepared using the same method.

Treatment Guidance in Severe Cases: If vomiting becomes excessive and the patient's condition deteriorates, apply a large *Hijama* cup (wet cupping therapy) over the stomach region [15]. This may provide relief from both diarrhoea and vomiting. Once the symptoms begin to subside, advise the patient to take *Hammam* (warm bath), followed by light, easily digestible food, and encourage restful sleep [15].

Sleep: Sleep is highly beneficial once the vomiting ceases, sleeping of the patient is very useful in this condition [7,8,15]. There is no better cure for cholera than sleep and starvation [9]. In Unani medicine, sleep and controlled fasting (*i.e., avoiding heavy food*) are considered among the most effective remedies for cholera.

Massage: Gentle massage (*Dalk Layyin*) of the hands and feet is recommended to stimulate circulation and provide comfort during recovery [7,8,13,14].

***Nutool*:** The arms, calves and thighs should be tied and cold water should be poured over them [7,8,15].

Pashoya: The hands and feet should be soaked in cold water to provide relief and reduce discomfort [7,8,15].

Zimad (Topical application)**:** A paste (*zimad*) made from the following ingredients should be applied to the stomach area:

- Pomegranate buds
- Banyan fibre
- Lentils
- Gulnar
- Poppy
- Pomegranate peel
- Barley straw
- Sandalwood
- Rose
- Camphor sugar [7,8].

Tila (Ointment)**:** A *tila* prepared by grinding ingredients like sandalwood, camphor, saffron, ladden in apple juice, *Aabe Behi* (quince water), rose water, and *Aabe Ase Sabz*

(a type of herbal extract) and should be applied to the skin [7,8].

***Hijama* (Cupping Therapy):** Apply dry cupping on the stomach, place another *hijama* between the shoulders [7,8]. In severe cases of vomiting and diarrhoea, perform wet cupping on the stomach area to help alleviate symptoms [9,15].

Hammam (Therapeutic bath)**:** Hippocrates stated that "The bath is highly beneficial in gastric diseases because it helps draw out substances that cause laxative effects in the gastrointestinal tract, directing them toward the surface of the skin [7,8].

Housing and Ventilation: The living environment should be cool, fresh-smelling, and filled with pleasant sounds. The bed must be soft and comfortable. To enhance the atmosphere, place fresh leaves and flowers such as *Baid Sada, Banafsha*, Rose petals, *Habbul Aas, Nilofer* (lotus), and apple leaves inside the house [7,8,13,14].

Food and Drinks: The diet for the patient should be light and easy to digest, given in small quantities. Recommended foods and drinks include:

- Food should be given in less quantity and suitable to the patient like chicken, chakor and pheasant meat [9].
- Fast-digesting and quick-dissolving items should be given in the diet, such as *Maul Laham* made from the meats of *halwan* (young goat) or sheep, mixed with pomegranate juice and *aabe behi* [7,8].
- Juices in ice-cold water to drink [2,14].
- Moderate cold water should be given [7,8].
- These juices should be used in thirst: pomegranate juice, *aabe behi tursh*, guava juice, apple juice, all or whatever is available should be given little by little. If vomiting occurs then only pomegranate juice should be given [7,8].

Prognosis and Recovery: According to Unani doctrine, sleep and fasting post-crisis significantly aid in recovery. Hippocratic wisdom on therapeutic baths complements Unani views, underscoring the synergy between traditional and modern frameworks. Controlled fasting, hydration management, and rest are pillars of recovery [7-9].

CONCLUSION

This review highlights the understanding of Cholera (a highly infectious disease still persists) in Unani medicine and their possible management and preventive measure which still relevant. The Unani conceptualization of *Haiza* offers insights into community-level care, dietary moderation, and humoral understanding of gastrointestinal diseases. When aligned with biomedical strategies, these classical measures may offer novel frameworks for culturally sensitive, integrative cholera management.

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