INTERNATIONAL JOURNAL OF UNANI AND INTEGRATIVE MEDICINE

E-ISSN: 2616-4558
P-ISSN: 2616-454X
www.unanijournal.com
IJUIM 2025; 9(2): 108-114
Impact Factor (RJIF): 6.3
Peer Reviewed Journal
Received: 18-06-2025
Accepted: 20-07-2025

Javeria Hashmi
Assistant Professor, Department of Amraze Atfal wa Naumoulood, Jamia Tibbiya, Deoband, Uttar Pradesh, India

Zoheb Alam Khan
Assistant Professor, Department of of Ilaj-bit-Tadbeer, National Institute of Unani Medicine, Ghaziabad, Uttar Pradesh, India

Shaista Praveen
Professor, Department of Moalijat, Jamia Tibbiya Deoband, Uttar Pradesh, India

Aamna Khan
Research Associate, Clinical Research Unit, Meerut, Uttar Pradesh, India

Corresponding Author:
Javeria Hashmi
Assistant Professor, Department of Amraze Atfal wa Naumoulood, Jamia Tibbiya, Deoband, Uttar Pradesh, India

Therapeutic efficacy of Unani management in post stroke disability: A review of literature

Javeria Hashmi, Zoheb Alam Khan, Shaista Praveen and Aamna Khan

DOI: https://www.doi.org/10.33545/2616454X.2025.v9.i2b.347

Abstract
Stroke is a leading cause of long-term disability and death globally, with a rising burden in low- and middle-income countries. Despite advancements in acute care, post-stroke rehabilitation remains complex and often incomplete. The Unani system of medicine, with its holistic principles and temperament-based diagnostics, provides an alternative approach to managing post-stroke disability particularly hemiplegia (*Falij*). Unani scholars such as Hippocrates, Galen, Ibn Sina, and Zakariya Razi described *Falij* centuries ago, attributing it to the obstruction of vital forces due to humoral imbalances, particularly the accumulation of *Balgham* (phlegm). Management strategies in Unani include *Ilaj bil Tadbeer* (regimental therapy), *Ilaj bil Dawa* (medication), and *Ilaj bil Ghiza* (dietotherapy). Therapies like *Fasd* (venesection), *Hijama* (cupping), *Dalk* (massage), and warming interventions are used to stimulate nerve function, reduce obstructions, and restore balance. This review explores the classical understanding and therapeutic approaches to *Falij* in Unani medicine and highlights their potential role in enhancing post-stroke rehabilitation. Though promising, these therapies require further scientific validation through well-designed clinical studies to support their integration into modern neurorehabilitation care.

Keywords: Unani medicine, falij, stroke, hemiplegia, traditional healing, regimental therapy, post-stroke rehabilitation, humoral theory, fasd, hijama

1. Introduction
Stroke, or cerebrovascular accident, is one of the most prevalent neurological disorders globally and is a major cause of long-term disability and mortality. It is the third most common cause of death in high-income countries after cancer and ischemic heart disease and the most common cause of severe physical disability. It drastically impacts not only the individual but also their families, caregivers, and the health care system as a whole. The World Health Organization (WHO) states that it is the second leading cause of death in people over 60 years and the fifth leading cause in those aged 15-59 years. It is also the leading cause of disability and functional impairment, with 20% of stroke survivors requiring institutional care after three months and 15%-30% being permanently disabled. Additionally, it is the second leading cause of dementia and a predisposing factor for epilepsy [1,2].

The term "stroke" was first used in 1599 as a synonym for apoplectic seizure and was introduced into medicine formally in 1689 by William Cole. The American Stroke Association in 1990 introduced the term "brain attack" to underline the acute nature of the condition [4]. In Unani medicine, the condition resembling stroke is known as Falij, derived from the Arabic word meaning "splitting into halves [3, 4]. This is because only one side of the body is usually affected, giving the appearance of a split. The term Istirkha is also used synonymously, although subtle differences exist between the two. According to Unani scholars, Falij in a broader sense implies Istirkha regardless of the part involved and can include everything from *Sakta* (apoplexy) to paralysis of a single finger. In a more specific sense, it refers to paralysis of one longitudinal half of the body, usually sparing the face and head [3, 5].

The earliest references to Falij can be found in ancient Unani texts. Buqrat (Hippocrates) described *Sakta* (apoplexy) as being due to an excess of *Balgham*, and was among the first to associate paralysis with brain injury. He stated, “unaccustomed attacks of numbness and anesthesia are signs of impending apoplexy’ [6]. Jalinoos (Galen) noted that hemiplegia occurs due to lesions in the opposite side of the brain and attributed it to an accumulation of

Balgham [7]. Zakariya Razi described numerous cases of Falij, detailing the treatment for each [8, 9]. Ibn Sina, the foremost Unani scholar, provided a comprehensive account of Falij, explaining the mechanism behind the loss of motor and sensory function and suggesting regimental procedures for rehabilitation [3].

From an Unani perspective, Falij is caused mainly by obstruction in the brain or nerves, often due to *Sudda* or accumulation of *Ghaleez Balgham*. This leads to impairment in the transmission of *Rooh-e-Hassasa* (sensory spirit) and *Muharrika* (motor spirit), resulting in loss of sensation and voluntary movement [10]. The temperament (*Mizaj*) of elderly individuals is considered *Barid* (cold), making them more susceptible to Falij due to the reduction in innate heat (*Hararat Gharizia*) and moisture (*Rutubat*), which otherwise help in tissue repair [3].

Given the significant burden of post-stroke disability and the limitations of conventional rehabilitation in ensuring complete functional recovery, there is increasing interest in traditional systems like Unani medicine. The Unani approach focuses on Usoole Ilaj (principles of treatment), primarily *Tanqiya* (evacuation of morbid matter) and *Ta'deel-e-Mizaj* (normalization of temperament), using regimens such as *Dalak* (massage), *Fasd* (venesection), *Hijama* (cupping therapy), and administration of *Munzij* and *Mus'hil* drugs [5, 6]. These therapies aim to evacuate the pathological matter, restore neurological function, and rejuvenate the affected organs.

This review aims to evaluate the therapeutic efficacy of Unani management in post-stroke disability (Falij), by analyzing classical texts and understanding how these principles and practices can contribute to modern rehabilitation frameworks.

2. Historical Perspective

The concept of Falij, synonymous with hemiplegia or post-stroke paralysis, has been extensively discussed in the Unani system of medicine since ancient times. The earliest mention of the brain, along with descriptions that resemble hemiplegic conditions, can be found in the Edwin Smith Surgical Papyrus dating back to 3500 BC, which included a description of the meninges and cerebrospinal fluid as well as salient features that align with *Falij* [11, 12].

In Ayurvedic medicine, the term *Pakshaghata* or *Pakshavadha* is used to describe a similar condition. *Paksha* implies one side of the body and *Aghata* means a blow or destruction, closely corresponding to hemiplegia [3].

In the Unani tradition, Buqrat (Hippocrates, 460-377 BC) was among the first to define *Sakta* (apoplexy), attributing its cause to the excessive accumulation of *Balgham* in the brain. He suggested that paralysis and convulsions result from injuries to the brain and famously noted, "Unaccustomed attacks of numbness and anesthesia are signs of impending apoplexy," which aligns with the modern concept of transient ischemic attacks (TIA). He also introduced the term *Apoplexy*, derived from the Greek word meaning "struck down with violence," to describe sudden paralysis often due to cerebral ischemia [7, 8].

Jalinoos (Galen, 131-201 AD) enhanced understanding of *Falij*, stating that hemiplegia results from lesions in the contralateral side of the brain and emphasizing the role of *Balgham* accumulation. His anatomical inferences remain valid to a significant extent even in modern neurology [8].

Zakariya Razi (865-925 AD) documented various theories about the pathogenesis of Falij, many of which were influenced by Jalinoos. He discussed clinical cases and treatments, stating that "if any organ is incapable of performing its physiological function and lacks sensation, then the organ may be considered to have Falij" [5,6].

Rabban Tabri (9th century AD) attributed Falij to obstruction of the nerves by *Ghaleez Balgham*, outlining the site of obstruction, etiology, signs and symptoms, and treatment [10].

Ali Ibn Abbas Majoosi (949-982 AD) proposed that obstruction of nerve roots in the spinal cord could paralyze the entire body and disrupt *Quwwat-e-Mudabbira-e-Badan*, the body's governing force, leading to *Abreqalsa* (a condition resembling paralysis) [13].

Ibn Sina (980-1037 AD) described Falij as longitudinal paralysis affecting one side of the body, from head to toe, and provided a detailed mechanism behind the loss of motor and sensory function. He advocated regimental therapies as essential for rehabilitation in Falij [14].

Ahmad Al Hasan Jurjani (1041-1136 AD) equated Falij with *Istarkha*, indicating paralysis of the muscles (*Azlat*) and their associated tendons (*Autar*) [7].

Ibn Hubal Baghdadi (1121-1213 AD) used Falij and Istarkha synonymously, mentioning causes like *Sudda* (obstruction) or *Warm* (inflammation) in the nerve roots, which obstruct the flow of *Rooh-e-Hassasa* and *Muharrika*, resulting in paralysis [15].

Ibn Rushd (1126-1198 AD) differentiated between general neuronal weaknesses (*Istarkha*) and localized neuronal weakness (*Falij*) [9].

Hakim Akbar Arzani (1721 AD) described Falij as paralysis of one longitudinal half of the body. If the facial muscles were also involved, he called it *Falij Maa Laqwa*. He considered *Sudda* and *Warm* in the spinal nerves and brain as primary causes [11].

Hakim Azam Khan (1813-1902 AD) stated that Falij is a type of *Istarkha* in which movement and sensation of one half of the body are impaired, sparing the head and neck. He emphasized that the prognosis depends on the underlying cause and altered *Mizaj* [12].

In modern medicine, the term *stroke* began to be used as a synonym for apoplectic seizure around 1599 [16].

Johann Jacob Wepfer (1620-1695), a Swiss physician, was the first to describe extracranial and intracranial carotid thrombosis, noting that apoplexy could result from cerebral hemorrhage [12, 13].

Thomas Willis (1621-1675) introduced the term "neurology" and identified the arterial network at the base of the brain, now known as the Circle of Willis. He also related internal capsule lesions to hemiplegia [17].

William Cole likely first introduced the term "stroke" into medical language in 1689.

Giovanni Battista Morgagni (1682-1771) demonstrated that blood extravasation damages brain tissue, causing apoplexy. He linked cerebral lesions to contralateral palsy [18].

Van Swieten (1700-1772) was the first to propose the concept of cerebral embolism arising from the heart or major vessels [3, 9].

In the 18th century, Jean Louis Petit discovered that the brain could survive even if one carotid artery is blocked [2].

Matthew Baillie (1761-1823) and Jean Cruveilher (1791-1874) further visualized stroke-related lesions in 1799 and 1829, respectively [4, 9].

In 1803, David Fleming performed the first successful

carotid artery ligation

Rudolf Virchow (1821-1902) identified thromboembolism as a major cause of ischemic stroke [19].

By the mid-19th century, studies like that of W.S. Savory (1856) began correlating clinical features with vascular occlusions [20].

Sir David Ferrier (1886) showed that motor cortex lesions cause hemiplegia in monkeys. However, Luigi Luciani and Arturo Tamburini, by keeping the animals alive longer, observed partial functional recovery, initiating debate on the degree of neurological recovery after brain damage [21].

The term cerebrovascular accident was formally introduced in 1927 [4]. In 1990, the American Stroke Association coined the term brain attack to emphasize the emergency nature of stroke [7].

Later 20th-century studies by Sherrington and colleagues showed spontaneous recovery in monkeys after lesions in the motor area, reinforcing the belief that some degree of natural recovery is possible post-stroke [22, 23].

3. Epidemiology of Stroke

Cerebrovascular accident (CVA) or stroke is among the most significant causes of death and disability worldwide. It is the third most common cause of death in high-income countries, following cancer and ischemic heart disease, and it is the leading cause of severe physical disability. Stroke represents a global health crisis that significantly impacts individuals, families, and healthcare systems [7].

The World Health Organization (WHO) identifies stroke as the second leading cause of death in people above 60 years and the fifth leading cause in individuals aged 15-59 years. It remains the leading cause of disability and functional impairment, with an estimated 20% of survivors requiring institutional care after three months and 15%-30% being permanently disabled. Additionally, stroke is the second most common cause of dementia and acts as a predisposing factor for epilepsy [2].

Every year, approximately 20 million individuals suffer from stroke, with 5.7 million deaths recorded globally in 2005. Alarmingly, two-thirds of these deaths occurred in low- and middle-income countries [36]. Stroke affects 1 in 6 people globally during their lifetime, and one person dies every six seconds due to stroke. The Indian Council of Medical Research (ICMR) reported in 2004 that 41% of deaths and 72% of DALYs (Disability Adjusted Life Years) due to non-communicable diseases were attributed to stroke [2].

The Indian National Commission on Macroeconomics and Health states that the risk of stroke doubles with each passing decade after the age of 55 [2]. While the annual age-standardized incidence of stroke has decreased by 1.1% in high-income countries, it has increased by 5.3% in low-income countries [24].

Globally, 12.6 million people live with moderate to severe disability due to stroke, with 8.9 million residing in middle and low-income countries [24]. WHO projections indicate that Asians have a higher stroke prevalence than Caucasians. The estimated age-adjusted stroke prevalence in India is about 84/100,000 to 262/100,000 in rural areas and 334/100,000 to 424/100,000 in urban areas [25].

According to the Framingham Heart Study (FHS), among ischemic stroke survivors aged 65 or above, the following disabilities were observed six months post-stroke. 50% had some form of hemiparesis,

- 30% were unable to walk without assistance,
- 26% were dependent in activities of daily living (ADLs),
- 19% had aphasia,
- 35% had depressive symptoms,
- 26% required institutionalization [26].

A positive family history of stroke in a first-degree relative increases the risk by approximately 50% in both men and women. Women account for 58% of stroke deaths in the U.S., attributed to their longer life expectancy [21, 24].

In the FHS, parental ischemic stroke before age 65 was associated with a threefold increase in ischemic stroke risk in offspring, even after adjusting for traditional risk factors. Certain genetic loci—such as HDAC9, Apolipoprotein E alleles, PMF1/BGLAP, and PITX2—have been associated with stroke at a genome-wide level [27].

In 2004, stroke was the sixth leading cause of global disease burden, accounting for 46.6 million DALYs, representing 3.1% of total global DALYs, with 41.8 million DALYs occurring in low- and middle-income countries [28]. In the WHO South-East Asia Region, stroke contributed to 9.6 million DALYs, making up 2.2% of total DALYs. Projections for 2030 indicate that the global stroke burden may rise to 4.3% of total DALYs [29].

Compared to high-income countries, India has a higher stroke prevalence among younger individuals. Stroke prevalence is 1.9% in urban India and 1.1% in rural India. Additionally, stroke is more common in men than in women in India, with a male-to-female ratio of 7:1.

Hospital data shows that stroke accounts for 7% of all medical admissions and 45% of neurological admissions in some studies. While the economic burden of stroke in India is not thoroughly documented, it was estimated that India lost $8.7 billion in 2005 due to coronary heart disease, stroke, and diabetes. This figure was expected to rise to $54 billion by 2015 [30, 31].

4. Pathophysiology of Falij

Unani medicine describes Falij as a paralysis resulting from obstruction in the flow of *Ruh-e-Hassasa* (sensory spirit) and *Ruh-e-Muharrika* (motor spirit) to one side of the body due to accumulation of abnormal matter (*Madda*). This obstruction is often attributed to:

- Sudda (blockage) of nerve pathways or cerebral vessels,
- Ghaleez Balgham (thick phlegmatic humor),
- Sue Mizaj Barid (cold temperament), which leads to weakening of the nerves (*Asab*) [32].

Classical Unani texts emphasize that Balgham, due to its cold and moist temperament, is the primary causative humor. It obstructs the proper distribution of *Quwa* (faculties) and *Ruh* (vital spirits) throughout the body. Elderly individuals, whose *Mizaj* is naturally colder and drier, are more prone to Falij due to diminished innate heat (*Hararat Ghariziya*) [33].

Ibn Sina explained that Falij occurs when the nerve roots in the brain or spinal cord are obstructed, leading to a loss of motor and sensory function in the affected half of the body [34]. Similarly, Zakariya Razi attributed Falij to obstructive pathological materials that disturb the flow of *Ruh*, causing loss of movement and sensation [35].

5. Classification of Falij

In the Unani system of medicine, *Falij*—a condition analogous to hemiplegia or post-stroke paralysis—is classified based on the site of involvement, underlying etiology, and associated humoral imbalances. Unani scholars, including Ibn Sina and Arzani, have delineated Falij into forms depending on the anatomical distribution of paralysis. *Falij Kulli* refers to complete hemiplegia involving one longitudinal half of the body, while *Falij Nisfi* denotes paralysis that spares the face and head. When facial paralysis (*Laqwa*) accompanies hemiplegia, the condition is termed *Falij Maa Laqwa*, indicating more extensive neurological involvement, possibly affecting both cerebral and cranial nerve pathways [30, 33].

Etiologically, Falij is further categorized into four distinct types based on the predominance of specific humours (*Akhlat*). The most common form, *Falij Balghami*, is attributed to the accumulation of thick and cold phlegmatic humour (*Ghaleez Balgham*) within the cerebral ventricles or neural tracts. This form typically presents insidiously and is most prevalent among the elderly, whose natural temperament (*Mizaj*) is already cold and moist, predisposing them to phlegmatic obstructions [34]. *Falij Damvi* arises from sanguineous imbalances due to excess blood (*Dam*), often presenting with acute features and symptoms associated with heat. This form bears similarities to hemorrhagic strokes in contemporary medical understanding [34]. A less common variant, *Falij Saudavi*, is linked to the dominance of black bile (*Sauda*) and is noted for its chronicity and resistance to conventional treatment [30, 34]. Finally, *Falij Warmi* is considered inflammatory in origin, resulting from *Warm* (inflammation) within the brain or spinal cord, and is typically accompanied by signs of heat, swelling, and systemic reactions [34].

From the Unani perspective, these classifications are grounded in the theory of temperament and humoral pathology, which guide not only diagnosis but also individualized treatment planning. The dominance of particular humours—cold and moist in Balghami, hot and moist in Damvi, cold and dry in Saudavi, and hot and dry in Warmi—plays a critical role in symptom presentation and therapeutic response [33, 34, 35].

6. Etiology and Risk Factors

The etiology of stroke, known as *Falij* in Unani medicine, is multifactorial and understood through different paradigms in modern and traditional systems. From the biomedical standpoint, stroke is primarily categorized into ischemic and hemorrhagic types. Ischemic stroke, which constitutes approximately 80-85% of all cases, results from thrombotic or embolic occlusion of cerebral arteries. In contrast, hemorrhagic stroke arises due to rupture of cerebral blood vessels, commonly linked to uncontrolled hypertension, aneurysms, or vascular malformations [35, 36]. Well-established modifiable risk factors include hypertension, diabetes mellitus, dyslipidemia, smoking, physical inactivity, obesity, atrial fibrillation, and excessive alcohol consumption [33, 36]. Non-modifiable risk factors such as advanced age, male gender, family history, and genetic predisposition further elevate stroke risk [37].

In Unani medicine, *Falij* is primarily attributed to an obstruction (*Sudda*) in the flow of *Ruh-e-Hassasa* (sensory spirit) and *Ruh-e-Muharrika* (motor spirit), caused by the accumulation of abnormal or morbid matter (*Madda*) in the brain, spinal cord, or peripheral nerves [34]. The dominant humour implicated in this pathogenesis is *Balgham* (phlegm), which possesses a cold and moist temperament. Accumulation of phlegm within neural pathways leads to coldness (*Burudat*) and loss of function in nerves (*Asab*), impairing sensory and motor conduction. This pathophysiological model explains why elderly individuals—who naturally have a colder and drier *Mizaj* (temperament) due to declining *Hararat Gharizia* (innate heat)—are considered more vulnerable to *Falij* [34, 35].

Classical Unani scholars like Ibn Sina and Zakariya Razi also recognized other causative factors, including *Dam* (excess blood), *Sauda* (black bile), and *Warm* (inflammation). For instance, *Falij Damvi* is associated with hyperemia or congestion in cerebral vessels, which bears clinical similarity to hemorrhagic strokes. *Falij Saudavi* is linked with melancholic disturbances and excessive black bile, while *Falij Warmi* results from inflammation and heat within the nervous tissue [36, 37, 38].

In addition to internal humoral disturbances, Unani texts identify several precipitating lifestyle and environmental factors that disrupt bodily balance and predispose individuals to *Falij*. These include sudden exposure to cold, suppression of natural urges, oversleeping, sedentary lifestyle, excessive consumption of cold and moist foods, and emotional disturbances. Such factors contribute to the stagnation and accumulation of humours in the nervous system, further exacerbating the condition [33].

Despite fundamental differences in theoretical frameworks, both Unani and modern systems of medicine emphasize the significant role of aging, systemic diseases, and lifestyle factors in the pathogenesis of stroke. This convergence offers promising scope for integrating Unani principles into contemporary preventive and rehabilitative strategies, potentially enriching stroke management through a more personalized and holistic approach.

Table 1: Etiology and Risk of Stroke/Falij

Aspect	Modern Medicine	Unani Medicine
Primary Cause	Vascular occlusion (ischemic) or hemorrhage	Obstruction (*Sudda*) of *Ruh* due to morbid matter (*Madda*)
Dominant Pathology	Thrombosis, embolism, vessel rupture	Accumulation of *Balgham*, *Dam*, *Sauda*, or *Warm*
Key Risk Factors	Hypertension, diabetes, dyslipidemia, smoking, alcohol, inactivity, obesity	Cold exposure, suppressed urges, over-sleep, sedentary habits, moist diet
Temperament Role	Not considered	Elderly with cold & dry *Mizaj* more vulnerable
Age & Gender	Risk increases with age; males more affected	Risk increases with age; temperament-based susceptibility
Systemic Conditions	Cardiovascular diseases, atrial fibrillation, metabolic syndrome	*Su-e-Mizaj*, organ weakness, imbalance in *Akhlat* (humours)
Subtypes Recognized	Ischemic, hemorrhagic, transient ischemic attack (TIA)	*Balghami*, *Damvi*, *Saudavi*, *Warmi*
Environmental/Lifestyle Triggers	Stress, poor diet, lack of exercise, smoking, alcohol	Cold climate, emotional stress, improper diet, excess rest, sudden fright

7. Clinical Features

The clinical features of *Falij* (hemiplegia) as described in Unani medicine show a striking resemblance to those recognized in contemporary medical science under the broader category of stroke. In modern medicine, stroke typically presents with a sudden onset of neurological deficits, including weakness or paralysis on one side of the body, loss of sensation, impaired speech (aphasia or dysarthria), facial droop, visual disturbances, imbalance, altered consciousness, and in severe cases, coma. The clinical picture depends on the location and extent of the brain lesion. For instance, involvement of the internal capsule or motor cortex leads to contralateral hemiplegia, while brainstem strokes can produce more severe deficits including quadriplegia or cranial nerve involvement [39].

In the Unani system, *Falij* is characterized by paralysis of one longitudinal half of the body, extending from head to toe in *Falij Kulli*, or sparing the head in *Falij Nisfi*. Patients typically present with loss of voluntary motor function and reduced or absent sensation on the affected side. The movement becomes flaccid, with loss of muscle tone (istirkha) and inability to perform coordinated voluntary activities. Facial muscles may be involved in *Falij Maa Laqwa*. Patients may also experience heaviness, numbness (*Khadar*), and coldness of the paralyzed side, attributed to accumulation of cold phlegmatic matter (Balgham) [33].

Furthermore, Unani scholars like Ibn Sina and Zakariya Razi described gradual onset in Balghami Falij, with symptoms worsening over time. In contrast, *Falij Damvi* or *Warmi* often presents acutely, with systemic features such as fever, heat, or a flushed appearance. The loss of sensation and movement is attributed to obstruction of the flow of *Ruh-e-Hassasa* and *Ruh-e-Muharrika* in the nerves due to humor accumulation [34].

Despite differences in terminologies and frameworks, both Unani and modern systems emphasize asymmetry, sensory-motor deficits, and functional impairments as hallmark features. The table below summarizes and compares these features:

Table 2: Comparative Clinical Features of Stroke (Modern Medicine) and Falij (Unani Medicine)

Clinical Features	Modern Medicine (Stroke)	Unani Medicine (Falij)
Onset	Sudden (in most cases); may be gradual in thrombotic stroke	Gradual in Balghami Falij; sudden in Damvi or Warmi Falij
Motor Deficit	Hemiplegia (paralysis of one side), facial palsy	Paralysis of one side (Falij Kulli/Nisfi), may include facial paralysis (Laqwa)
Sensory Deficit	Loss of sensation, numbness, tingling	Loss or reduction in sensation (Khadar), cold and heavy feeling
Muscle Tone	Initially flaccid, later spasticity may develop	Flaccid (Istirkha), limbs cold and motionless
Speech Involvement	Aphasia, dysarthria depending on lesion site	Not specifically detailed, but loss of voluntary coordination noted
Level of Consciousness	May be altered in large strokes or hemorrhage	Usually preserved; altered in Sakta (apoplexy)
Facial Involvement	Common in cortical or capsular strokes	Described in Falij Maa Laqwa
Laterality	Contralateral to brain lesion	One longitudinal half of the body affected
Prognosis	Depends on type, location, and time to treatment	Depends on temperament (Mizaj), humour involved, and regimental care

8. Diagnosis

The Unani system employs a temperament-based diagnostic approach rooted in classical texts and clinical observations. The diagnosis of *Falij* is primarily clinical, based on the recognition of signs such as loss of voluntary motor function, unilateral flaccid paralysis, loss of sensation, and coldness of the affected side. Detailed history-taking includes evaluation of the patient's Mizaj (individual temperament), lifestyle, dietary habits, and emotional state [33, 34]. The presence of cold and moist temperament supports a diagnosis of *Falij Balghami*, whereas heat signs or redness suggest *Falij Damvi* or *Warmi*. In addition to physical examination, inspection of pulse (Nabz), urine and stool examination, and observation of tongue, eyes, and skin color are traditional methods used to assess humoral imbalance and systemic derangements. The timing and manner of onset, along with associated symptoms like heaviness (Surda), numbness (Khadar), and facial involvement, further help to determine the type and severity of *Falij* [35].

While modern diagnostic protocols are heavily dependent on imaging and laboratory investigations, Unani diagnosis emphasizes a holistic and individualized assessment based on functional disturbances, humoral derangements, and temperamental deviations. Despite the differences, both systems prioritize early identification of neurological impairment and recognize the need for timely therapeutic intervention to prevent complications and facilitate recovery.

9. Unani Management of Falij

The Unani system of medicine offers a comprehensive and multi-modal therapeutic approach for the management of *Falij* (hemiplegia), grounded in the principles of restoring humoral balance, correcting temperament (*Mizaj*), and facilitating functional recovery through Ilaj bil Tadbeer (regimental therapy), Ilaj bil Ghiza (dietotherapy), and Ilaj bil Dawa (pharmacotherapy). The primary objectives of Unani management are to expel the morbid matter (Tanqiya-e-Madda), normalize the temperament, and restore the flow of Ruh (vital spirit) through affected nerves and organs [37, 38].

The cornerstone of Unani treatment is Ilaj bil Tadbeer, which refers to non-pharmacological regimens aimed at improving the physical and physiological state of the patient. Among the most frequently recommended regimens is Fasd (venesection), particularly effective in *Falij Damvi*, to eliminate excessive blood and reduce vascular congestion. Hijama (wet cupping) and Dalk (massage) are prescribed to enhance circulation, dissolve accumulated *Balgham*, and stimulate neuromuscular response. Massage is usually performed using medicated oils such as Roghan Baboona (chamomile oil), Roghan Kharateen (earthworm oil), or Roghan Qust, depending on the dominant humor involved [33, 35, 36]. Massage over the paralyzed limbs

improves vascularity and reduces stiffness, while massage on the vertebral column helps in relieving obstructions in the spinal nerves [33].

Hammam (steam bath) is another frequently advised therapy for *Falij Balghami* and *Saudavi*, as it facilitates elimination of phlegm and enhances the warmth in affected organs. Takmeed (hot fomentation), using warm medicated poultices, is beneficial in relieving rigidity and improving local circulation. In some cases, Islahe Mizaj (correction of temperament) is achieved through thermal interventions to balance cold and moist qualities of *Balgham* [33, 34].

In terms of Ilaj bil Dawa, several single and compound drugs with Muqawwi Asab (nerve tonic), Muhallil (resolvent), Munaffis (expectorant), and Daafi Sudda (deobstruent) properties are employed. Common formulations include Majoon Suranjan, Khamira Abresham, Habbe Azaraqi, and Majoon Jograj Guggulu. These remedies are selected based on the type of *Falij*, the patient's age, and overall *Mizaj* [35]. Specific herbs such as Suranjan (Colchicum luteum), Filfil Siyah (Piper nigrum), and Zanjabeel (Zingiber officinale) are used for their warming and dissolving properties to break down thick phlegmatic obstructions.

Ilaj bil Ghiza or dietary management emphasizes consumption of warm, dry, and easily digestible foods, especially in *Balghami* and *Saudavi* Falij. Foods that generate excessive moisture or coldness are restricted. Soups, lentils, and spices like ginger and black pepper are encouraged to stimulate digestion and internal heat production [40].

Conflict of Interest
Not available.

Financial Support
Not available.

10. Conclusion

Unani medicine offers a holistic and time-tested approach to managing *Falij* (post-stroke hemiplegia), focusing on humoral balance, nerve revitalization, and functional restoration. Regimens like Fasd, Hijama, Dalk, and herbal formulations provide promising adjunctive options for improving recovery in stroke survivors. While the classical understanding differs from modern biomedical concepts, both systems recognize similar clinical features and therapeutic goals. Integrating Unani practices with contemporary rehabilitation may enhance outcomes in post-stroke disability, but further scientific validation is essential.

11. References

1. Garrison FH. History of neurology. Revised and enlarged by McHenry LC Jr. Springfield: Charles C Thomas Publishing; 1969.
2. Taylor FC, Kumar SK. Stroke in India: 2012 factsheet. https://www.researchgate.net/publication/264116605_Stroke_in_India_-_Fact-sheet_Updated_2012
3. Sina I. Al Qanoon Fil Tib. Urdu translation by Kantoori GH. New Delhi: Idara Kitabul Shifa; 2007.
4. Jurjani I. Zakheera Khawarzam Shahi. Urdu translation by Khan HH. New Delhi: Idara Kitab us Shifa; 2010.
5. Arzani A. Tibbe Akbar. Urdu translation by Hussain M. New Delhi: Idara Kitabul Shifa; 1890.
6. Khan MA. Akseere Aazam. Urdu translation by Kabeeruddin M. New Delhi: Aijaz Publication House; 2003.
7. Fields WS, Lemak NA. A history of stroke. New York: Oxford University Press; 1989.
8. Razi AMBZ. Kitabul Hawi. Urdu translation by CCRUM. New Delhi: Ministry of Health and Family Welfare, Government of India; 1997.
9. Razi AMBZ. Kitabul Mansoori. Urdu translation by CCRUM. New Delhi: Ministry of Health and Family Welfare, Government of India; 1991.
10. Tabri AAM. Molaejat Buqratiyah. Urdu translation by CCRUM. New Delhi: Ministry of Health and Family Welfare, Government of India; 1997.
11. Garrison FH. History of neurology. Revised and enlarged by McHenry LC Jr. Springfield: Charles C Thomas Publishing; 1969.
12. Breasted JH. The Edwin Smith surgical papyrus. Great Britain: University Press Oxford; 1980.
13. Majoosi AA. Kamil us Sanaah. Urdu translation by Kantoori GH. New Delhi: Idara Kitab us Shifa; 2010.
14. Sina I. Al Qanoon Fil Tib. Urdu translation by Kantoori GH. New Delhi: Idara Kitabul Shifa; 2007.
15. Baghdadi AIAIH. Kitabul Mukhtarat Fil Tibb. Urdu translation by CCRUM. New Delhi: Ministry of Health and Family Welfare, Government of India; 2005.
16. Gund BM, Jagtap BN, Ingale VB, Patil RY. Stroke: a brain attack. IOSR J Pharm 2013;3(8):1-23.
17. Gurdjian ES. History of occlusive cerebrovascular disease. Arch Neurol 1979;36:340-343.
18. Garrison FH. An introduction to the history of medicine. Philadelphia: WB Saunders Co; 1929.
19. Willis T. Dictionary of scientific biography. New York: Charles Scribner's Sons; 1976.
20. Demarin V, Zikie M, Zikie TR. Stroke: a historical overview and contemporary management. Curr Top Neurol Psychiatr Relat Discip 2011;19(2):15-23.
21. Jeelani G. Makhzane Hikmat. New Delhi: Aijaz Publishing House; 1994.
22. Tabri AAM. Molaejat Buqratiyah. Urdu translation by CCRUM. New Delhi: Ministry of Health and Family Welfare, Government of India; 1997.
23. Ropper AH, Brown RH. Adam and Victor's principles of neurology. 8th ed. New York: McGraw-Hill; 2005.
24. Venes D, Thomas CL, Egan EJ, Morilli NA, Neil AD, Houske A. Taber's cyclopedic medical dictionary. 19th ed. USA: F.A. Davis Company; 2001.
25. McPhee SJ, Papadakis MA. Current medical diagnosis & treatment. 49th ed. New York: McGraw-Hill; 2005.
26. Kumar A, Sagar R, Kumar P, Sahu JK, Grover A, Srvastav AK, *et al.* Identification of genetic contribution to ischemic stroke by screening of single nucleotide polymorphisms in stroke patients using a case-control study design. BMC Neurol 2013;13:136.
27. Feigin VL, Lawes CMM, Bennett DA, Collo SL, Parag V. Worldwide stroke incidence and early case fatality reported in 56 population-based studies: a systematic review. Lancet Neurol 2009;8(4):355-369.
28. Bellenguez C, Bevan S, Gschwendtner A, Spencer CA, Burgess AI, Pirinen M, *et al.* Genome-wide association study identifies a variant in HDAC9 associated with large vessel ischemic stroke. Nat Genet 2012;44:328-333.
29. World Health Organization. The global burden of disease: 2004 update. Geneva: WHO; 2008.

30. Murray CJL. Quantifying the burden of disease: the technical basis for disability adjusted life years. Bull World Health Organ 1994;72:429-425.
31. Murray CJL, Lopez AD. Mortality by cause for eight regions of the world: Global Burden of Disease Study. Lancet 1997;349:1269-1276.
32. Lopez AD, Murray CJL. The global burden of disease, 1920-2020. Nat Med 1998;4(11):1241-1243.
33. Truelsen T, Bonita R, Jamrozik K. Surveillance of stroke: a global perspective. Int J Epidemiol 2001;30:11-13.
34. Dalal PM. Burden of stroke - Indian perspective. J Assoc Physicians India 2004;52:695-696.
35. Darwin M. The pathophysiology of ischemic injury. http://www.alcor.org/Library/html/ischemic.html
36. Kumar V, Abbas AK, Fausto N. Robbins and Cotran pathologic basis of disease. 7th ed. Saunders Elsevier Inc.; 2004.
37. Dey NC, Dey TK. A text book of pathology. 15th ed. Calcutta: New Central Book Agency (P) Ltd.; 2003.
38. Mohan H. Textbook of pathology. 5th ed. New Delhi: Jaypee Brothers; 2006.
39. Alagappan R. Manual of practical medicine. 4th ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd.; 2011.
40. Shah SN, Anand MP, Acharya VN, Karnad DR, Bichile SK, Kamath SA, *et al*. API textbook of medicine. 7th ed. Mumbai: The Association of Physicians of India; 2003.

How to Cite This Article
Hashmi J, Khan ZA, Praveen S, Khan A. Therapeutic efficacy of Unani management in post stroke disability: A review of literature. International Journal of Unani and Integrative Medicine**.** 2025; 9(2): 108-114.