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Review Article

Tanqiya wa Tadeel (Evacuation and Rejuvenation): The *Unani* Concept as Evolutionary Basis for Conventional Stroke Management

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Abstract

The treatment of stroke has always been a challenge for all systems of medicine. The modern medicine has substantially been capable to treat and control both, the haemorrhagic and ischemic strokes in emergency situations. The current approach of modern medicine relies on thrombolysis, antithrombosis, neuroprotection and rehabilitation. While the former two approaches yield significant mortality and morbidity reduction with available thrombolytic and antithrombotic agents but the latter two approaches have limited success with prevalent neuroprotective agents and physical therapy. While the Unani medicine approach in treatment of stroke strongly resemble to that of modern medicine, the action of thrombolysis and antithrombosis exerted by Unani drugs; however, remains undesirably slow in acute stroke and may lead to relatively extended damage to brain tissues in comparison to significantly effective control achieved by modern medicine. The latter part of stroke recovery in the form of rehabilitation remains tardy with available modern approaches, however, several studies done in stroke rehabilitation, following the principle of *Tanqia* and *Tadeel* of Unani medicine, have shown promising results in relatively rapid recovery from various post stroke disabilities. Unani drugs used in various dosage forms under the rubric of *tanqia* and *tadeel* possess antioxidant, anti-inflammatory, analgesic and neuroprotective properties represented by *Muhallil* (Resolvent), *Mulattif* (Demulcent), *Munaqqie Dimagh* (Brain Cleanser), *Mufatteh Sudad* (Deobstruent), *Muhallile Auram* (Anti-inflammatory) and *Jali* (Cleanser) terminologies, used for drug actions in Unani medicine. The explicable reason of early recovery during rehabilitation appears to be the rapid improvement in neuroplasticity of brain exerted by various active constituents of Unani drugs used in various combinations and permutations in different dosage forms. The term *tanqia* stands for evacuation of morbid material and *tadeel* for rejuvenation. The principle of *tanqia* and *tadeel* of Unani medicine offers all therapeutic approaches for various forms and stages of stroke and therefore provides theoretical and practical bases for the evolution of modern medical approaches in stroke management.

Keywords: *Falij; Istefragh; Munzij; Mushil; Nuzj*

INTRODUCTION:

Hemiplegia is the paralysis of either longitudinal half of body with loss of motor with or without sensory functions. The main cause of hemiplegia is stroke which is considered the third main cause of death and disability in India[1]. WHO defined stroke as a rapidly developing clinical signs of focal (at times global) disturbance in cerebral functions, lasting more than 24 hours or leading to death with no apparent cause other than that of vascular origin. Stroke was said to be common medical casualty with an incidence of around 180 to 300 per 100000. Upto 90% survivors among yearly affected people report one or more disabilities[2]. Ischemic or haemorrhagic brain injury limits an individual physically and socially leading him to depression[1]. *Falij* causes loss of movement and sensation in longitudinal half of the body because the penetration of *Roohe Hassas* and *Muharrik* (sensory and motor transmission of impulses) into the organs may either be arrested or the *Rooh* may penetrate but the organs may be unresponsive due to *Sue Mizaj-e-Aza* (Abnormal temperament of organs)[3,4]. The description of *Istirkha* and *Falij* in classical *Unani* literature refers to paralysis. *Istirkha* simply means paralysis of any organ, the *Falij* specifically indicates the *Istirkha* (paralysis) of a longitudinal half of body starting either from head to toe or sometimes below the neck, sparing the head[3-5].The acute management of stroke has been focused and well scrutinized, but when it comes to rehabilitation of survivors, conventional medicine has limited approach and effectiveness; the patient are referred for rehabilitation programme such as physiotherapy, which has a restricted role to play as Nang-Hing L. quoted that physiotherapy intervention either at home or as outpatient may affect or

improve the gait speed but not to be clinically significant and hard to maintain[6].

Causes of *Falij*

Two major causes are described in classical *Unani* literature for the occurrence of *Falij*.

A. ***Sudda* (obstruction):**

Obstruction prevents the transmission of *Roohe Hassas* (sensory impulses) and *Roohe Muharrik* (motor impulses) to targeted organs and this obstruction may be due to ligation, abnormal accumulation of *Khilt-e-Balgham*, inflammation in the passage, and compression or contusion of nerves due to injury[4,5,7].

B. ***Sue Mizaj-e-uzwi* (abnormal temperament of organ):**

The propagation/transmission of nerve impulses is normal but the organ remains unresponsiveness to the impulse of *Roohe Hassasa* and *Muharrika* due to *Sue Mizaj-e-uzwi* owing to abnormal excessive heat (*Hararat*), cold (*Barudat*), dryness (*Yabusat*) or moistness (*Ratubat*)[4,5,7].

Most of the *Unani* physicians mentioned that *Falij* is usually caused by quantitative or qualitative disproportion of *Khilt-e-Balgham* (Phlegm) followed by *Khilt-e-Dam* (Blood)[8,9]. *Buqrat* (Hippocrates) mentioned that people having a tendency of suffering from frequent common cold and coryza, are more prone to develop *Falij*. *Jalinoos* (Galen) wrote that people, having superfluous cold humours in their brains, may develop *Falij* after sudden exposure to excessive heat and cold [10,11]. *Ibne Sina* (Avicenna) revealed that *Falij* occurs more in winter than spring season and commonly in people around 50 years of age, inhabiting southern countries, due to production of excessive fluid in their heads owing to specific territorial temperament known as *Mizaj-e-Junubi* (Temperament of Southern Region)[3,12].

Classification of *Falij*:

Azam Khan classified *Falij* according to its causes as follow [7].

I. ***Falij-e-Balghami Ratubi:*** Quantitatively or qualitatively disproportionate *Balgham* descends from the brain affecting the nerves by obstructing the routes of *Roohe Hassasa* and *Muharrika* leading to loss of movement and sensation. It is characterized by symptoms of *Galba-e-Balgham* such as increased sleep, decreased thirst, flabby body and comparatively whitish complexion. Most of the strokes occurring due to athero-thrombo-embolism should fall in this category, having the quintessential feature of obstruction in the vessels by an embolus or thrombus, leading to ischemic stroke and consequential hemiplegia.

II. ***Falij-e-Damwi:*** *Falij*, caused by *Imtila-e-Dam* (abundance of blood), is characterized by *Alamat-e-Ghalba-e-Dam* (Signs/Symptoms of abundance of Blood) such as engorged vessels, congested eyes, *Haar Malmas* and *Nabz-e-Mumtali.* The signs and symptoms as mentioned in *Unani* literature here resemble with those as found in the patients of hemorrhagic stroke, which usually results due to severe hypertension. *Ghalba-e-dam* (plethora of blood) is synonymous with increased blood volume, leading to hypertension as its severe forms may lead to rupture of blood vessels resulting in hemorrhagic stroke. The engorgement and congestion of the vessels is the result of high blood pressure and specific changes on the retinal surface such as flame shaped hemorrhages, cotton-wool- spots and yellow hard exudates produced by the hypertension allude to congested eyes in *Unani* medicine.

III. ***Falij-e-Intiqal-e-Bohrani:*** *Falij* may develop as a result of *Bohran* (crisis) in acute critical diseases like meningitis, apoplexy, epilepsy, abdominal colic, hysteria and acute fever. The morbid material, which should usually be evacuated through normal routes of the body, is abnormally diverted towards the delicate and vulnerable structures such as nerves during *Bohran* by the action of *Tabiyat* to cause *Falij* as *Tabiyat* has inadequate power to evacuate this morbid material completely through normal exit routes due to age or disease related weakness. This is quite evident in cases of pulmonary tuberculosis etc. where the infection may travel to meninges and the brain to cause tubercular meningitis or tubercular cerebral abscess, leading, sometimes, to cranial palsies and variable motor paralysis.

IV. ***Falij-e-Warami:*** The underlying cause of this type of *Falij* is inflammation which is gradualin onset. If, *Falij* is associated with fever, pain and severe symptoms, it is due to *Waram Har* and if the symptoms are mild, it is due to *Waram Rikhwu. Falij-e-Warami* usually develops due to meningitis or encephalitis per se and not as secondary to the infective complication of other organs. It is well known; however, that the complications of meningitis and encephalitis variably result in different types of motor and sensory paralysis, which have been referred to as sequelae of *Falij-e-Warami* in *Unani* literature.

V. ***Falij-e-Wabayi:*** *Mutaffun Hawa* (infected air) affects a large number of people in the same season at a particular place. *Falij* caused by *Mutaffun Hawa* is usually affects the left side of the body, associated with congested eyes, vomiting and halitosis. Epidemic encephalitis such as encephalitis lethargic, which gripped the world during 1915-1926 and Japanese encephalitis, still prevalent in northern India, are classical examples of *Falije Wabai.*

VI. ***Falij*** due to vertebral displacement: *Falij* may occur due to vertebral displacement in either side of the body.

VII. ***Falij*** due to fall or trauma: Any injury, trauma, accident, etc. may results in *Falij*

Based on the parts affected, *Falij* may be of following types [5,7,9]

a. ***Falij*:** Paralysis of the longitudinal half of the body.

b. ***Khala / Falij ma'a Laqwa:*** Paralysis of half of the body including ipsilateral or contralateral involvement of head and face.

c. ***Abu Bilqisya:*** Paralysis of whole body except face. This type of paralysis is seen in cervical cord diseases.

d. ***Sakta:*** Paralysis of whole-body including head and face. This may be the presentation of hemorrhagic stroke of basilar part of brain.

e. ***Falij-e-Asfal / Falij-e-Atrafi:*** This is the Paralysis of lower limb and a manifestation of dorso-lumbar disc diseases.

Signs and Symptoms:

If the whole body is paralyzed except face, it indicates the effect of *Madda-e-Marz* (causative matter) on the first vertebrae of spinal cord. If the whole body, including face, is paralyzed, it suggests the *Madda-e-Marz* (causative matter) is related to brain. Sudden severe headache, engorgement in the vessels of the neck, blurring of vision, cold peripheries, gritting of teeth during sleep, difficulties in movement are some common symptoms found in *Falij*[13,14].

MATERIAL AND METHODS:

The data for the present paper was extracted from freely available English peer-reviewed journal articles and RCTs that predominantly focused on the use of *Unani* medicine in the management of *Falij*. The terms *Unani*, *Unani* medicine, *Munzij*, *Mushil*, *Tadeel*, *Tanqiya* combined with *Falij* were used for search. The *Unani* literature has been taken from classical *Unani* treatises such as *Kitab al-Hawi fit Tibb* by *Razi*, *Alqanoon Fit Tibb* by *Ibne Sina*, *Tibb-i-Akbar* by *Akbar Arzani*, *Akseer-i-Azam* by *M. Azam Khan*, *Zakhira Khawarzam Shahi* by *Ismail Jurjani*, *Firdous ul Hikmat* by *Rabban Tabri*, *Ghina Muna* by *Al-Quamri*, *Mizanut Tibb* by *Akbar Arzani, Kitab ul Mukhtarat fit Tibb* by *Ibn Hubal, Sharah Asbaab* by *Samarqandi, Kitabul Fakhir fit Tibb* by *Razi.*

RESULTS:

*Buqrat*mentioned that Chronic *Falij* is very difficult or impossible to treat. Even *Falij* of low intensity is not easy to treat. *Jalinoos* stated that if *Marz-e-Balghami* (phlegmatic disease) such as *Falij* (hemiplegia) occurs in childhood and no treatment appears promising in restoring the lost functions, the disease fades away with passing years. *Qusta* described localization of lesion and their prognosis in treatment of neurologic diseases. He described that if patient is able to speak words, the lesion is in spinal cord, and is also easily treatable; if speech is not clear or totally absent, then the lesion is in brain, and is difficult to treat[15].

Usool-e-Ilaj (Line of Treatment):

Unani physicians advocate to refrain from using strong drugs especially *Mushil (Purgative*) in the early phase of *Falij,* spanning 4 to 7 days, which may be extended up to 14 days depending upon the severity of disease. In early phase, *Gul-e-Angabin Asli* (honey rose water) is advised with lukewarm water and *Ayarij* mixed with *Tiryaaq* (antidote) 1gm or simply *Maul Asl* (honey water). After 14 days, treatment is based on the concept of *Tanqia Mawade Raddiya* (Evacuation of Morbid Matter), *Tadeel-e-Mizaj* (Rejuvenation of Temperament), and *Taqwiat-e-asab* (Strengthening of Nerves)[5,8,16].

Tanqiya (Evacuation):

The first line of treatment in the management of *Falij* is *Tanqiya* which literally means 'getting rid of' or to 'clean up' *Akhlat-e-Raddiya* (Morbid Humours) by the process of *Nuzj* (Concoction) and *Istifragh* (Elimination)[5,7].

Nuzj (Concoction):

Nuzj is a process of modification in the viscosity of *Akhlat-e-raddiyah* in order to make them suitable for evacuation conveniently from their sites of lodgement and diseased organ. For this, drugs having properties like *Tahleel* (dissolution), *Taqtie* (disintegration) and *Talteef* (attenuation) are generally used and termed as *Muhallil*, *Muqatte* and *Mulattif*, respectively. *Muhallil* may be defined as the drugs which act on *ghaleez khilt* (viscid humour) to make it dissoluble and detachable from its site of pathology. *Mulattif* are those drugs which interact with Quwatt-*e-tabiya* of the body to divide the morbid matter into smaller parts. *Muqatte* are the drugs which penetrate into the interstitial spaces of the organs due to their lightness and remove the adhered *khilt* from the organ. Drugs possessing all these properties are known as *Munzijat* (Concoctive)[2,3,17,18].

Munzijat (Concoctive):

Munzijat is a group of drugs which appropriately alters the consistency of morbid *Akhlat* to render them easily eliminable from the diseased organ. These drugs work either by liquefying the *ghaleez akhlat*, or thickening the *raqeeq akhlat*. They are classified as *Munzij-e-balgham*, *Munzij-e-safra*, and *Munzij-e-sauda*. These drugs enhance the process of recovery and healing in the injured and inflamed tissues by their anti-inflammatory, analgesic, antioxidant and antiseptic properties. They streamline and bring about desired changes in the inflammatory fluid of the injured tissues and promote normal and enhanced healing pattern in them. Enhanced normal pattern of healing by various vascular and cellular changes in injured tissues by active constituents of *Munzij* drugs may be termed as *Nuzj* in *Unani* medicine. The ingredients of *Munzij-e-Balgham* formulation are as follows; *Aslusoos* (*Glycyrizza glabra* Linn), *Ustukhuddus* (*Lavendula stoechas* Linn), *Beikh-e-Kasni* (*Cichorium intybus* Linn), *Beikh-e-Karafs* (*Apium graveolens* Linn), *Gauzaban* (*Borago officinalis* Linn), *Inabussalab* (*Solanum nigrum* Linn), *Beikh-e-Kibr* (*Capparis spinosa* Linn), *Badyan* (*Foeniculum vulgare* Mill), *Anjeer* (*Ficus carica* Linn), *Maweez Munaqqa* (*Vitis vinifera* Linn) [7,19].

Istifragh (Evacuation):

Istifragh is the process of evacuation of *Akhlat-e-Raddiyah*. Once, the *akhlat-e-raddiyah* mature for evacuation from the affected organs after a course of *Munzijat* therapy, purgatives (*Mushilat*) are employed into work. These drugs are believed to assist the elimination of concocted material out of the body[7].

Mushilat (Purgatives):

Mushil drugs have characteristics to rid the morbid *Akhlat* out from the diseased organ, concerned vessels, neighboring structures and from whole body through intestine by process of purgation. According to their tendency of affinity with different *Akhlat,* they are named as *Mushil-e-Balgham*, *Mushil-e-Safra* and *Mushil-e-Sauda*[7]. *Mushilat*, though do not appear to have apparent relation with the cleansing of the brain tissues especially when the *Munzijat* have already done the dissolution action on the viscid humours, the purgative action; however, seems to have a bearing on the healing and recovery process of the injured brain tissues in two possible ways: firstly, the drugs used for purgation may have a cleansing effect on the brain tissues by further lysis and dissolution of clogging material in the arteries and secondly enhance the absorption of inflammatory exudates in to the venules to cleanse the injured tissues as the heavy purgation may change the osmotic properties of the intravascular compartment and facilitate absorption of relatively less concentrated fluid around the injured brain tissue into the surrounding vessels to render it favourably less oedematous and contracted in size, to ultimately decrease the intracranial pressure and promote the healing. The ingredients of M*ushil-e-Balgham* formulation are as follows; *Ustukhuddus* (*Lavendula stoechos* Linn), *Barg Sana* (*Cassia angustifolia* Vahl), *Turbud* (*Ipomoea turpethum* Linn), *Maghz Faloos Khyarshambar* (*Cassia fistula* Linn), *Roghan-e-Zard* (*Ghee)*[7,19].

Tadeel (Rejuvenation):

The next step in the management of *Falij* is *Tadeel-e-Mizaj* which means temperamental normalization of involved

organs after the process of purgation.For restoration of *Mizaj-e-Tabai* (Normal Temperament), single or compound drugs having *Haar Mizaj* are recommended as per the principle of *Ilaj-biz-Zid* (Hetero-therapy). Apart from oral medications, certain regimenal modalities are also recommended for the rejuvenation of the affected organ such as *Dalk* (massage), *Hijama* (dry/wet cupping), *Aabzan* (Sitz bath), *Shamoom* (aromatherapy), *Tila* (liniment), *Gargarah* (gargle), *Takmeed* (fomentation), *Fasd* (venesection), *Huqna* (enema), *Hammam* (Turkish Bath). *Tadeel* is one of the most distinguished features of principles of *Unani* treatment. Any existential substance in the universe remains in its naturally healthy state as long as it maintains *Mizaj-e-Tabai* (normal temperament) and continues to function and plays its role in the hierarchy of universe. The disintegration of *Mizaj-e-Tabai* leads to depreciation, loss or abnormally altered function of a body. *Tadeel* refers to regaining structural integrity and function of the cells and tissues in an organ. There are various methods to replenish and reinvigorate the function of an organ after its initial recovery from the injury. After a course of *Munzij* and *Mushil*, the course of *Tadeel* begins by employing various treatment modalities used for a range of attending complication of *Falij* [7,8,13,15].

The best considered regimenal modality for *Falij* is *Riyazat* (Exercise) and diet restrictions. This arrangement dissolves the thick phlegm and produces yellow bile in the body, beneficial for paralyzed patients. *Riyazat* is advised to maintain the tone of the muscles. The type of *Riyazat* depends on the site of affected muscles; thus, *Riyazate Mutarakhiya* (Exercise with weak and slow movements) is appropriate for facial palsy; *Riyazate Motadil* (average strenuous exercise) for upper limbs paralysis and *Riyazate Hasheesha* (fast and strenuous exercise) for lower limbs paralysis[20].

DISCUSSION:

Tanqia and *Tadeel* represent complete package of treatment for the patients of stroke. It is evident that approximately 85 percent of strokes are ischemic in nature, produced by athero-thrombo-embolic phenomenon. The occluded artery thus produces a wedge-shaped infarct zone in its area of blood supply, surrounded by ischemic and dysfunctional zone, known as penumbra. The main aim of the treatment in modern medicine is to salvage the penumbra which remains viable for few hours depending on several coexisting and comorbid factors. Early and aggressive treatment with thrombolytics and antithrombotics within the golden hours salvages the ischemic penumbra by dissolving the occluding thrombus and recanalizing the artery,while accruing delay in the treatment proportionately increases the magnitude of damage of penumbra, thereby increasing the infarct size and attending complications in the form of more residual disabilities and delayed rehabilitation. This phase takes several weeks to a few months and is characterized by rapid recovery due to recanalization, establishment of collateral flow and reduction in inflammation in infarct zone[21-24]. This may be considered the first phase of recovery in patients of stroke. This phase of recovery is exerted by *Munzij* and *Mushil* drugs, which together form *Tanqia* (evacuation and cleansing), the first phase of the treatment of stroke in *Unani* medicine. The drugs prescribed in formulation of *Munzij* are endowed with properties such as *Tahleel* (dissolution), *Taqtee* (disintegration) and *Talteef* (attenuation)which fairly resemble the thrombolytics, antithrombotic and neuroprotective agents of modern medicine in their actions, aimed to dissolve the occluding thrombus. From the *Unani* perspective, these drugs are *Muhallil* (Resolvent), *Mulattif* (Demulcent), *Munaqqie Dimagh* (Brain Cleanser), *Mufatteh Sudad* (Deobstruent), *Muhallile Auram* (Anti-inflammatory)and *Jali* (Cleanser) which tend to open the obstruction and re-canalise the vessels; reduce the inflammatory reaction and edema; scale down the damage of ischemic penumbra, and ultimately limiting the neuronal damage, thereby, helping in rapid recovery in first few weeks of stroke.

After the elimination of abnormal phlegm represented by *Sudda* (thrombus), the nervous structures become receptive to regain lost vigor, vitality and normal functions, which are achieved by using various drugs and regimenal procedures and this phase of recuperation and rejuvenation is known as *Tadeel* [7,16-17].This phase is marked by slow recovery which continues from weeks to months, even years. While the first phase was characterised by dissolution of thrombus, recanalisation and reduction in brain edema, the second phase is known for tardy recovery caused by certain characteristic structural and chemical changes in brain tissue known as neuroplasticity. Neuroplasticity has been defined as the ability of the brain to change and repair itself. The mechanisms of neuroplasticity essentially comprise neurochemical, neuroanatomical and neuroreceptive changes. Trophic molecule such as nerve growth factor plays a key role in growth and repair of process. Sprouting of injured axons to innervate the previously innervated synapses is known as regenerative synaptogenesis (collateral sprouting). Improvement in neurotransmitter release and receptor sensitivity is termed as synaptic plasticity. Changes in synaptic strength, long term potentiation (LTP), firm up neuronal connections and serve as a basis for all memory and learning. Different and underutilized areas of the brain (e.g., cortical supplementary and association areas) can take over the functions of damaged tissue, a process called as v*icariance.* The unmasking of new, redundant neuronal pathways permits cortical map reorganization and maintenance of function. Whole different areas of the brain are also capable of becoming reprogrammed, a process termed as substitution[25]. The whole changes in the structure of the brain as a recovery process after the stroke are considered to be brought about by *Muqawwi-e-Dimagh* (Brain Tonic), *Munaqqi-e-Dimagh* (Brain Cleanser), *Muqawwi-e- Asab* (Nervine Tonic) properties of the drugs used under the rubric of *Tadeeel*.

The *Unani* herbal drugs used in the treatment of stroke are thought to bring about not only the recuperative changes in the brain tissues but also provide protection from noxious substances and chemical processes implicated in the damage of the nervous tissues due to ischemia, termed as neuroprotection.

Neuroprotection is a concept which lays out a treatment to prolong the brain's tolerance to ischemia [17,26]. It also includes prevention of oxidative stress, mitochondrial dysfunction, inflammation and apoptosis[17,27]. Studies suggest that glabridin (a major flavonoid of *Glycyrrhiza glabra*) significantly decreases the focal infarct volume, cerebral histological damage and apoptosis[28]. Antioxidant[29-30], anti-platelet and anti-inflammatory activities of *Glycyrrhiza glabra*[30-31] were also reported. Memory enhancing activity of *G. glabra* was also reported in a laboratory-based experimental trial[30,32]. The neuroprotective activity of *Ustukhuddus* is reported against cerebral ischemia which is attributed to its anti-oxidant activity[33-34]**.** Essential oil of *Badyan* (*Foeniculum vulgare Linn*) showed antithrombotic activity in prevention of induced paralysis[35]**.** *Badyan* is supposed to be an excellent source of natural antioxidants which can inhibit free radicals

due to the presence of highly potent chemical constituents having antioxidant activity[36]. *Chicorium intybus* is well known medicinal plant having phytochemicals throughout the plant but the main contents are present in the root which was described by *Unani* physicians thousands of years back as *Beikh-e-Kasn* [37,38]. Antioxidant, analgesic and anti-inflammatory activities of *Chicorium intybus* were reported in various studies[37]. It was also reported that chicory has anti-neurotoxic and neuroprotective activities[39]. Antioxidant and anti-inflammatory activities of *Apium graveolens* L. are reported through various studies[40-42]. Antioxidant and memory enhancement activities of *Borago officinalis* Linn were reported in animal models[43]. *Berg-e-gauzaban* (leaves of borage) contains gamma-linolenic acid (GLA) which is prescribed as anti-inflammatory agent with the belief of having fewer side effects than other anti-inflammatory agents. GLA is also reported as having anti-thrombotic activity [44]. Neurodegeneration is supposed to be potentiated with uncontrolled production of free radicals which can be controlled up to some extent with external antioxidants. *Inabussalab* (*Solanum nigrum* Linn) is reported to have significant antioxidant and anti-inflammatory activities[45-47]. Anti-inflammatory action of *Beikh-e-Kibr* (*Capparis spinosa* Linn) has been proved in various reports. Root extract of *Capparis spinosa* is reported as having pain relieving activity[48-50]. The therapeutic use of *Anjeer* (*Ficus carica* Linn) is mentioned in USM for a wide range of ailments. Anti-inflammatory, antioxidant and anti-platelet activities of *Ficus carica* were reported in various studies[51-52]. *Maweez Munaqqa* (*Vitis vinifera* Linn), also known as grapes, have been used since thousands of years for their medicinal as well as nutritional benefits. Antioxidant as well as anti-inflammatory activities of *Vitis vinifera* have been reported [53].

CONCLUSION:

Unani medicine has the potential to treat *Falij* as the classical literature of *Unani* medicine is highly enriched with centuries old experiences of eminent *Unani* physicians. *Tadeel wa Tanqiya*, a unique concept, offers a comprehensive treatment package for stroke patients. The drugs used sequentially in the treatment of stroke under *Tanqia* and *Tadeel* comprise the requisite constituents, offering timely management of the developing pathology, augment healing, restrict damage, protect from further damage and rehabilitate the patients of stroke with least residual disability accompanied with little side effects and adverse reactions. With all the salutary and wholesome offers, the *Unani* treatment of stroke on the lines of *Tanqia* and *Tadeel*, alone or as an adjuvant may provide a breakthrough as an alternative or integrative approach to contemporary stroke management.

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