

Role of Ilaj bid Dawa with Rationalising of Usoole Ilaj in the Treatment of Falij - A Pharmacological Perspective

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Abstract

Falij has been a major topic in Unani literature since centuries. The aspects of diagnosis and treatment based on Usoole Ilaj have remained a hallmark in the management of Falij. The packaged treatment of Falij includes almost all modalities of treatment- Ilaj Bil Ghiza, Ilaj Bid Dawa, and even surgical intervention. Unani medicine has dealt the disease management in stepwise, rational manner. The treatment strategies vary from the day patient seeks treatment and duration of the disease in the patient. Emphasizing on administration of Maul-Asal / usool in the initial days, munzij mushil therapy in the mid-course along with drugs for tabreed and taqwiyaat administration in the later days is regarded as the standard treatment guideline for Falij. Along with this guideline rules related to Ayaame buhran which depend on the Mizaj of the person and the deranged khilt are taken into consideration for individualisation of the treatment is very evident. Since the treatment of any disease needs to be dealt keeping various features in view, so framing of usoole Ilaj has got paramount importance. The paper details the pharmacological basis of the treatment along with Usoole Ilaj of various phases of treatment delineating the Unani mechanism of action underlying each Afa'al (pharmacological actions) of Unani drugs.

Keywords: Falij, Unani drugs, Usoole Ilaj.

Introduction

The term *Falij* is derived from Arabic word “*Falaja*” means divide into two symmetrical parts [1]. Generally, word *Falij* is used for *Istirkha*. In particular, *Falij* means *Istirkha* or paralysis of half body from head to toe

longitudinally. It has two types; one involves head and other spares it [1,2]. Loss of movement, if developed in whole body is called *Istirkha* and if only one part is involved, is known as *Falij* (**Table 1**). Ancient physicians

of Unani medicine were considering *Falij* as a disease in which one side of body is paralysed from head to foot. But according to Sahibe Kamil *Falij* is known as a disease in which one side of body excluding head is paralysed [3].

Falij is sometimes referred as loss of both motor and sensory functions. The differentiation between these two functions is described by *Ibne Rushed*: “Often if any one of these functions (*hissand harkat*) is lost other is also lost, though it is not mandatory” as mentioned by Galen also [4].

Causes of *Falij* [3]

- *Nazfe Dimaghi* (Brain haemorrhage)
- Obstruction of arteries of brain or clotting of blood.
- Brain tumour
- Epilepsy
- *Talayyune Dimagh* (Softness of Brain)
- Chorea
- Hysteria

Table 1: Types of *Falij*

Falije Nisfi / Falij	Falije Ma` A Laqwa (Hemiplegia with Facial Paralysis)	Falije Aam / Abu Bilqisya (Quadriplegia)	Falije Atrafi / Falije Asfal (Paraplegia)	Falije Maqami
When paralysis in longitudinally in half of the body	When paralysis occurs whole longitudinal half of the body including head and face.	When paralysis occur in whole body except face.	When paralysis occur in lower part (lower limb) of the body.	Paralysis of particular / individual organ. e.g. Hand, foot, tongue.

Pathological Basis of *Falij*

According to Galen:

(1) If posterior part of brain is injured *Falije Nisfi* (Hemiplegia) occur, if whole brain is injured *saktah* (Quadriplegia) occur.

(2) If first part of *mabda-un-nukha* (spinal cord) is affected whole body is paralyzed, if one side of spinal cord is affected same side of body is paralyzed.

(3) If both side of brain near spinal cord is affected *Saktah* (Quadriplegia) occur, if one side of Brain is affected *Falije Nisfi* occur [3].

Common cause of *amraze Asaab mizaji* or temperamental neurological disease is *buroodat*; either *buroodat* alone or associated with *Balgham*. *Sauda* is next to *Balgham* and *Safra* hardly causes neurological disease due to its fast dissolving nature [2].

The dominance of *buroodat* and *rutoobat* in any organ often interrupts the sensory and motor functions. *Buroodat* is opposite to *Mizaj* of *Rooh*. Therefore, it produces *Takhdeer* or decline of sense in *Rooh*. *Rutoobat* makes that organ blunt and insensitive [1]. Besides

dominance of *Buroodat* and *rutoobat*, pathology in brain is also considered as a cause of movement disorders. According to *Ibne Sina* “loss or diminution of movement anywhere in the body is often because of lesion in the brain” [1]. According to *Nafeesi* “if the *jarme urooq* (vessel wall) is *sulb* or hard and blood is in excess quantity, rupture may occur in brain or heart vessels causing haemorrhage. It does not happen in other organs of body” [5].

The cause of *Falij* may be *Sudda*(any obstruction) in the course of nerves due to contamination of *Khilte Balghami Ghaleez* in brain or neurons, compression or dislocation of spinal cord, injury to these structures and residual effects of acute diseases like Meningitis [6].

Initially *Imtila* occurs in the part of *Butoone Dimagh* or Ventricles of brain, then suddenly it is dissolved from there and these *Barid Balghami* wastes descends to either left or right side of the body, whichever side is weaker [7].

Usually occurs in elderly when their brains are occupied with *Khilte Barid* (cold humours) and suddenly they come in contact with either hot or cold temperature which melt this *Khilt*, carrying it up to the root of nerves. Mostly this

condition develops in persons with *Zaeef* (weakened) nerves [6].

Usoole- Ilaj of Falij

Betterment of moakkhar Dimagh: In all the diseases of nerves betterment of *Moakkhar dimagh* is aimed primarily [1].

Taadeel-e Mizaj: Normalisation of *Mizaj* if only *Kaifiyat* is altered.

Tanqiyah: Elimination of causative matter if there is excess *khilt*. *Sue-Mizaj Maddi* is relieved by two courses; *Istifraghe Mawad* (elimination of causative matter) and *Islahe Mizaj* (correction of temperament). *Sue- Mizaj Maddi* is alleviated by drugs having *Mulattif*, *Muqawi*, *Muarriq*, *Mulayyen*, laxative and *Muddirre baul* properties. For *Istifraghe Mawad* two methods are used: first is *Fasad* or Venesection while second includes using *Mushil* or purgative drugs, *Muqi* or emetic drugs and *Huqnah mushilah* [2].

It is mandatory to use *Mulattif* drugs e.g. *Anisoon*, *Tukhme Shibat*, *Ajwain*, *Tukhme Karafs*, *Beekh Badyan*, *Beekh Karafs*, *Beekh Izkhar*, *Aslussoos* etc. In *joshanda* (Decoction) with *Gulqand* daily morning and after 4th, 7th or 14th day *Mushil* is given [8].

Mushil regime: while using *mushilat* (purgatives) following things should be taken into account.

- Addition of *Muqawi Qalb* (heart tonic): to potentiate and stabilize *Roohe Haiwani*.
- *Muddirrat* (Diuretics) not to be used in major quantity as it hinders the effect of *mushily* [9].
- Causative material is *khilte balghami* so *munzije balgham* drugs having *talteef*, *Taqtee* and *Tehleel* properties to be used. Drugs like *turbud* and *ustookhoodus* are added for effective elimination [1].

Taqwiyat: following *Tanqiyah* potentiation is provided to nerves and body massage [7] with *Haar Mizaj* oils having *Muhallil* and *Muqawie A'asaab* actions, to dissolve the causative matter and potentiate the nerves [8].

Drugs used according to usoole ilaj

- **For Tadeele Mizaj:** Renowned Unani Physician *Zakariya Razi* (Rhazes 850-923 AD) advocated a prescription based on the principles of treatment (*Usoole Ilaj*).

“The treatment has to be started with *Habbe Muntin* for *Tanqiyah* (containing *Ayarij Feqra* 3.5 g, *Shahme Hanzal*, *qunturiyoon Daqeeq*, *Usaara Qissul Hima*, 1.75 g each, *Farfiyun*, *Jund bedastar*, *Filfil*, *Hilteet*, *Sakbeenaj*, *jaosheer*, *Sheetraj Hindi*, *Khardal* 0.35 g each with *Aabe Suddab* and any of *Samaghiyat*) for one day following massage with *Roghane Qust*, and orally *Maul Asal* and 7gm of *Balazri* (containing *Zanjabeel*, *Aaqar Qarha*, *Shoneez*, *Qust*, *Filfil*, *Dare filfil*, *Waj* 10 parts each, *Barghe Suddab khushk*, *Hilteet*, *Juntiyana*, *Zarawand*, *Habbul ghaar*, *Junde bedastar*, *Sheetraj*, *Khardal* and *Baladur* 5 parts each fried with *Roghane Akhrout*, with *Asale khalis* and *Samaghiyat*) for three days to be used for *Tadeele Mizaj* and this treatment cycle is to be given 10 times” [10].

- **For Talteefe Mawad:** In first seven days *Gulqand* + *Maul buzoor* or *Gulqand* + *Maul usool* is preferred.

Maul Buzoor: *Aneesoon*, *Soya*, *Ajawain desi*, *Tukhme Karafs*.

Maul Usool: *Beekhe Badayan*, *Beekhe Karafs*, *Beekhe Izkar*, *Beekh Aslussoos*.

- **For Tanqiyah Mawad:** No *mushil* should be given in initial stage of treatment, as *Allama Nafeesi* said “*Mawad* of *falij* is raw, not suitable for effect of *mushil* drugs and not able to excrete. If *Mushil* drug is given these raw matters become active and may be dangerous”. So, after *Talteefe Mawad* and *Nuzj*, elimination of causative matter is done with *Mushil* (Purgatives) drugs like *Soya*, *Murznajosh*, *Nakhoona*, *Methi*, *Tukhme Arand*, *Injeer*, *Aslussoos*, *Shahad*, *Kanji*, *Roghane zaitoon*, *Tukhme hanzal* and some *Qurs* like *habbe sheetraj*, *habbe muqil* etc. are used.

- **For Taqwiyat-e-Asaab:** After *Tanqiyah* potentiation of nerve should be focused with application (Massage) of *Haar Mizaj* oils on vertebra and diseased part like *Roghnae Arand*, *Roghane Zaitoon*, *Roghane*

Klakalnj, Roghane Sumbul Romi, Roghane Qust, Roghan Soya etc [3].

Mamool-e-matab nuskha

In initial phase of treatment for first seven days nothing is given in the form of diet except *Maul Asal*. *Saqeel*, indigestible, flatulent and food, drinks and drugs of cold temperament should be avoided.

Preparation of Maul-Asal

- 20 ml *Asale khalis* boiled with water or *Arqe Gao zaban* 20 ml.
- *Ustukhuddoos*, *Badranjeboya* boiled in water then *Asale khalis* (20 ml) is mixed.

After seven days *Nuskha Munzij* is given for 12 days.

Nuskha Munzij: *Badyan, Beekh Badyan, Beekh Izkhar, Beekh Kibar* 7 g each, *Parsiyaaooshan, Aslussoos muqasshar, Goazaban, Ustukuddoos* 5 g each, *Injeer zard*

(3 *adad*), *Maweez munaqqa* (9 *dana*) soaked overnight in warm water, filtered in the morning and mixed with *Khamira banafsha* 40 ml. After 12 days-*Mushil* (purgatives) drugs are added with *Munzijat*.

Mushilat (purgatives): *Sana makki, turbud safed* 7 g each, *Maghze amaltas, shire khisht* 40 ml each, *Turanjabeen, shakar surukh* 40 ml each, *Sheerah maghz badam shsirin-5* in number each with *Gulqand* 40 g.

After 12 days when *Tanqiyah* is completed, *Taqwiyate Asaab* (potentiation of nerves) is focused with administration of *Khustae gaudanti* 2 mg, *Majoon Seer* or *Majoon Azaraqi* or *Majoon Jograj gogul* 5 g with *Arqe Gaozaban* 120 ml in the morning and *Khamira Abresham Hakeem Arshad wala, Dawaul Misk Haar Jawahar wali* with *Arqe Gao zaban* 20 ml in the evening.

Local Application: For better result after *Tanqiyah*, massage with *Roghane Qust* or *Roghane Surkh* on paralysed organ is done [3].

Table 2: Pharmacological basis of drugs used in the treatment of Falij

Name of Drugs	Mizaj	Afa'al (Actions)
Aslussoos (<i>Glycyrrhiza glabra</i>)	Hot ² Dry ¹ [11]	<i>Mulattif, Jali</i> [12], <i>Muqawie Asaab</i> , excretes <i>Rutoobat</i> through motion, normalizes <i>Akhlat</i> , cleanse the vessels of body, <i>Mudirre Baul Mudirre Haiz</i> [11].
Badyan (<i>Foeniculum vulgare</i>)	Hot ² Dry ¹ [11,13]	<i>Mufatteh, Mulatiff, Muddirre Baul</i> , eliminates <i>Rutubate Raqeeq</i> and <i>akhtlate ghaliz lazij</i> or viscid humours from stomach [11,13].
Ustukhuddoos (<i>Lavendula stoechos</i>)	Hot ¹ Dry ² [12]	<i>Mulattif, Muqawie Asaab, Mufatteh sudad</i> , induces <i>nuzuj</i> in <i>Balgham</i> and <i>sauda</i> and removes through bowel [12].
Beekhe Badyan (<i>Foeniculum vulgare</i>)	Hot ² Dry ² [11]	Along with <i>Maul Asal</i> produces <i>nuzuj</i> in <i>Balgham</i> [11].
Anisoon (<i>Pimpinella anisum</i>)	Hot ² Dry ³ [11]	<i>Mulattif, Jali, Mufatteh, Kasire Riyah, Muddirre Baul</i> , effective in <i>Falij</i> when used with <i>gulqand asali</i> [11,12].
Tukhme Karafs (<i>Apium graveolens</i>)	Hot ² Dry ² [11]	<i>Muhallil, Muarriq, Muddirre Baul</i> , useful in <i>Barid Balghami amraz</i> , enhances the effect of <i>mushil</i> drugs [12,13].
Ood saleeb (<i>Paenia emodi</i>)	Hot ² Dry ² [11]	<i>Muqawie Asaab, Mufarreh, Mufatteh sudad, Mulattif</i> and <i>Mujaffif</i> properties [11,13].
Beekhe Izkhar (<i>Andropogan jwarancusa</i>)	Hot ¹ Dry ² [11]	<i>Mufatteh, Mulayyen, Mulatiff</i> , eliminates <i>ghaliz Akhlat</i> after producing <i>Nuzuj</i> , removes waste from Brain [12,13].
Barge Gaozaban	Hot ¹ Ratab ¹	<i>Mufarreh</i> , potentiates <i>Arwah, hararate ghairizi</i> and <i>Aazae</i>

(<i>Borage officinalis</i>)	[11]	<i>raeesa, Mulayyen, Mulattif sauda, excretes Akhlate Muhtariqah</i> [11,12].
Gulqand Asli	Hot ¹ Dry ¹ [11]	Induces <i>nuzuj, talteef, Muqawi dimagh meda wa jigar</i> improves digestion, effective in <i>Falij</i> , facial palsy [11].
Barge Sana (<i>Cassia angustifolia</i>)	Hot ¹ Dry ¹ [13]	<i>Mushil</i> for <i>murrah safra</i> and <i>Balgham</i> [13].
Turbud (<i>Ipomia turputhum</i>)	Hot ³ Dry ³ [13]	<i>Mushil</i> , eliminates <i>Balghami lazij</i> from brain through purgation, beneficial for <i>Falij</i> , convulsion and other neurological disorders [12,13].
MaghzeFloos Khayar Shanber (<i>Cassia fistula</i>)	Hot ¹ Wet ¹ [11]	<i>Mushil, Mulayyen</i> , purifies the Nerves, along with turbud it purges <i>Balgham</i> [11-13].
Roghan zard (ghee)	Hot ¹ Wet ¹ [13]	<i>Muhallil, Munzij, Mulayyen, musakkin</i> , normalizes the consistency of causative matter, helps to remove the blockage and potentiates Brain [11,13].
Roghane Malkangni (<i>Celastrus paniculatus</i>)	Hot ¹ Wet ¹ [11]	<i>Muqawie Asaab</i> , used in <i>Falij, Laqwa, Wajaul mafasil, Nigras, Khadar</i> and <i>zuafe Asaab</i> [11].

Scientific studies related to some commonly used drugs (Table 2)

Aslussoos: Roots and rhizomes of *G. glabra* have been studied; study suggested that the aqueous extract of roots 250 and 500 mg/kg possess a Cerebro protective effect in sod. Nitrite induced hypo toxic rat which may be mediated by its anti-oxidant effect [14].

Beekh Badyan: In vivo, both essential oil and Anethole (the main component of oil) orally administered in a sub-acute treatment to mice (30 mg kg per day for 5 days) showed significant anti thrombotic activity preventing the paralysis induced by collagen-epinephrine i.v. injection (70-83%) protection respectively [15].

Ustukuddoos: *L stoechus* flowers were studied for its possible Anti-convulsant, Anti-spasmodic activity. It increased the latency of convulsions induced by pentylene tetrazole. Lavender from *Lavandula angustifolia* also decreases the tone in the skeletal muscle preparation of phrenic nerve- diaphragm of Rats [16].

Aneesoon: Neuro protective effect of Anise oil was observed [17].

TukhmeKarafs: Apigenin was studied on the contraction of rat thoracic aorta, it was

concluded that Apigenin relaxes rat thoracic aorta mainly by suppressing the Calcium influx through both voltage receptor-oriented calcium channel [18].

Ood Saleeb: sedative, anti-inflammatory activities were assessed, and it has blocking effect on neuromuscular junction [19].

Barge Goazaban: Leaves were tested for flavonoids, coumarins, sterols and tannin, produced a contraction- dependent relaxation of spontaneous and k⁺ (80 mM) induced contraction in isolated rabbit jejunum preparation, suggestive of calcium antagonist effect [20].

Barge Sana: *Cassia angustifolia* contains anthraquinone, carbohydrates, flavonoids, glycosides. Senna is a potent laxative and its use in chronic constipation patient has been assessed [21].

Turbud: Anti-secretory, ulcer protective, anti-inflammatory, hepatoprotective, anti-bacterial and anti-oxidant activity was confirmed [22].

Roghan Malkangni: Borrelli et al. proved that extract of *Celastrus paniculatus* seeds exerts a powerful myogenic and L-type calcium dependent relaxing effect in the isolated Rat and the human ileum is sensitive to the inhibitory effect of its extracts [23].

Conclusion

The present study revived the treatment guidelines of Falij in Unani medicine. It also attempted to rationalise the same by documenting various scientific reports of the drugs used in Falij. Further studies in clinical setting are required to validate the treatment guidelines.

Conflict of Interest

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