EFFECTIVENESS OF A UNANI REGIMEN IN THE TREATMENT OF FALIJ-E-NISFI (Hemiplegia): CASE SERIES

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ABSTRACT

Fali-j-e-Nisfi (Hemiplegia) is a condition in which there is loss of movement and sensation in longitudinal half of the either side of the body. It is the commonest form of paralysis, occurring due to stroke or cerebrovascular accident. Stroke is the leading cause of disability worldwide and second most common cause of death. Post stroke hemiplegia is most common causes of disability in adults. In India its prevalence is 56.9 per 100,000. Unani scholars from various part of the world have been treating the condition of Fali-j-e-Nisfi (Hemiplegia) since centuries successfully. Different effective regimes are available in Unani system of medicine (USM) for the treatment of Fali-j-e-Nisfi (Hemiplegia). Those treatments are effective and having fewer side effects. In the present paper the case studies of two female patients suffering from Fali-j-e-Nisfi (Hemiplegia) due to stroke treated with Unani formulations is reported. This case series documented the successful treatment and prevention of recurrence of hemiplegia through Unani medicines. It concluded that the Unani regimen was effective and safe in the management of hemiplegia.

Keywords: Cerebrovascular Accident, Disability, Fali-j-e-Nisfi (Hemiplegia), Nervous System, Stroke.

INTRODUCTION

Fali-j is an Arabic word meaning “to halve”. Fali-j is a paralytic condition where loss of movement and sensation in longitudinal half of the body on either side starting from below the neck, sparing head or face and covering the entire longitudinal half the body from head to foot. This description similar with hemiplegia in allopathic system of medicine. It is a well-known neurological disorder may occurs at any age, any time, in either sex but mostly affect Barid Mizaj (Phlegmatic temperament) people. In Greco-Arabic period fali-j was first described by Buqrat (Hippocrates, the father of medicine (360 B.C)) after him other physicians such as Jalinoos (Galen 129-200 A.D) RabbanTabri (770-850 A.D), SabitIbnQurrah (836-903 A.D), Ali bin Abbas Majusi (900-994 A.D), and IbnSina were described its aetiology, pathophysiology, clinical features, prognosis, treatments and it complications. In Unani system of medicine (USM)fali-j was divided into four types). 1) Fali-j-e-Muqami: in which specific organ or part of the body get paralysed such as hand, leg and tongue. 2) Fali-j-e-Asfal (Paraplegia): lower part (below the back) of the body get paralysed. 3) Fali-j-e-Aam (General paralysis): in which all part and muscles of the body

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get paralyses. 4) Falij Ma Lqwa (Hemiplegia with Facial Palsy); paralysis in longitudinal half of the body including face) Falij-e-Nisfi (Hemiplegia); in which loss of movement and sensation in longitudinal half of either side of the body. 5) Falijoccurs due to Sudda (obstruction) in Asab (nerves), Sharainwa Auradha (arteries and veins) and Butoon-e-Dimagh (Ventricles of brain), they arrest penetration of Rooh Hassas (sensory impulses) and Rooh Muharrrik (motor impulses) into the organ and cause Falij. Sudda is usually composed of Ghaleez and Luzj Tabahlgham (thick and viscid phlegm). Falij is caused by Ghair Tabai Balgham hence its Mizajis considered as Balghami, eBarid Ratab (cold and wet). Old people in their advance age develop Baridmizaj (cold temperament) hence they have more risk to develop falij. Falij also occurs due to failure of organ in respond to the stimulation by Arwah due to fasad-e-Mizaj. According to Avicenna “Tanqia should be the first choice if the cause of a disease is morbid Akhlat”. In Unani treatment of Falije Nisfi consists of Tanqia Mawade Raddiya (evacuation and cleansing) Ta’deel Mizaj (rejuvenation), Taqwiate Aam and Taqwiate Aasab. Census 2011 (India) has revealed that 5,436,604 persons are paralysed due to different causes, which ultimately lead to physical, psychological, social & economic burden on the community. In conventional system of medicine the treatment is too costly and time taking hence Unani system of medicine has treasure of single and compound drugs are very effective in treatment of Falij-e-Nisfi (Hemiplegia).

Case 1: Patient information and clinical finding:
A 38 years old female patient visited to the Mohammadia tibia college & assayer hospital (Mansoora), Malegaon in outpatient department, with complaints of weakness of muscles on either side of the body, difficulty in walking, loss of sensation in affected side of the body, difficulty in speech from 8 days. The patient was well before 8 days ago then she developed of sudden onset of headache and hand pain followed by sudden weakness of muscles of left side of the body.

On Examination: A 38 year old female was 156 cm tall with weight 70kg so BMI is 28.8 kg/m². The heart rate was 86/min while B.P was 130/90 mm Hg with 98.6°F temperature, respiratory rate was 18/min. The heart, lung, abdomen and renal system were normal. Pallor was present and jaundice and cyanosis were absent. She was married female taking mixed diet but appetite was reduced hence bowel habit not cleared with reduced frequency and quantity of micturition. Patient was hypertensive since 3 years taking TELMA 40 mg (OD) at night. The personal and family histories were negative for DM & HTN. On Nervous Systemic Examination patient was well oriented to time, place and person with intact higher mental function (memory, speech & intelligence). All Cranial nerve from 1 to 12 were normal in their function except 7th cranial nerve (facial nerve) is slightly affected (watering from the eyes). In left side of the body sensory system is slightly low as compare to right side of the body. Patient has less sensation with pin and blunt objects, temperature sense (hot and cold), Vibration sense (tuning fork) and patient was unable to identify the position of finger or toe of left side of body. Superficial reflexes (planter reflex, abdominal reflexes and Wartenberg’s sign were normal in right side of body and diminished in left side of the body. Deep reflexes (Biceps, triceps, ankle knee and finger flexion, supinator reflexes) were diminished in left side of the body. Muscle power was mentioned in table No.1 and muscle tone diminished in left side of the body. Right 5/5, 5/5 Left 4/5, 5/5

| Muscle power of Case 1. |
|--------------------|--|------------------|------------------|
|                  | Upper | Lower | Upper | Lower |
| Before            |      |      |      |      |
| Right             | 5/5   | 5/5   | 5/5   | 5/5   |
| Left              | 2/5   | 1/5   | 4/5   | 5/5   |

Diagnosis: The patient was diagnosed on the basis of Computed Tomography Scan of Brain and physical examination. The legend 1 is the report of the high resolution and real time CT scan of brain done on 26/05/21 before start of treatment. This report confirmed that there was hematoma measures about 2.7×1.5 cms in right lentiform nucleus and corona radiate. The investigations CT scan, Urine analysis, Liver Function Test, Haemogram and Kidney Function Test were performed at base-line and post treatment.

Case 2: Patient information and clinical finding: A female patient of 47 years old person visited the Mohammadia tibia college & assayer hospital (Mansoora), Malegaon in outpatient department, with complaints of weakness of...
On Examination: A 47 year old female was 158cm tall with weight 53kg so BMI is 21.2 kg/m². The heart rate was 78/min while B.P was 140/90 mm Hg with 98.6 F temperature, respiratory rate was 16/min. The heart, lung, abdomen and renal system were normal. Pallor was present, jaundice and cyanosis were absent. She was married female taking mixed diet but appetite was reduced hence bowel habit not cleared with reduced frequency and quantity of micturition. Patient was hypertensive since 3 years taking Amlodipine 5mg (OD) at night. The personal and family histories were negative. On Nervous Systemic Examination patient was well oriented to time, place and person with intact higher mental function (memory, speech & intelligence). All Cranial nerve from 1 to 12 are normal in their function except 7th cranial nerve (facial nerve) is slightly affected (watering from the eyes). In right side of the body sensory system was slightly low as compare to left side of the body. Patient has less sensation with pin and blunt objects, temperature sense (hot and cold), Vibration sense (tuning fork) and patient was unable to identify the position of finger or toe of left side of body. Superficial reflexes (planter reflex, abdominal reflexes and Wartenbergs sign are normal in right side of body and diminished in left side of the body. Deep reflexes (Bicep, triceps, ankle, knee and finger flexion, supinator reflexes) were diminished in left side of the body. Muscle power was mentioned in table No.1 and muscle tone was diminished in left side of body. Cardiovascular system (CVS) was normal on inspection. Apex beat is palpable in 5th ICS with no any tenderness. On auscultation S1-S2 heard, no any added sound and no murmur was found. Respiratory system was normal chest was B/L symmetrical with normal movement with no any scar and tenderness, with normal resonating note and Air entry bilaterally equal (AEBE). Abdomen was scaphoid in shape, umbilicus was normal, no any scar mark or venous engorgement. On percussion Dullness over the abdomen and no fluid trill and shifting dullness. Bowel sound was 6-9t/minute.
Table 2: Muscle power of case 2.

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**Diagnosis**
The patient was diagnosed on the basis of Computed Tomography Scan of Brain. The legend 2 is the report of the high resolution and real time CT scan of brain done on 17/05/21 before start of treatment. This report confirmed that right thalamic intracerebral haematoma was measures about 28×20 mm. The investigations USG (whole abdomen), urinalysis, Liver Function Test, Haemogram and Kidney Function Test were performed at base-line and post treatment.

**Legend 2: The finding of CT scan at baseline.**

**Dietary restrictions:** Patient was advised to restrict Beef, Meet, chicken, oily food, spicy food and fried food. Avoid to use of cold water and cold foods. He was also advised to cover the affected side with cloths (protect from cold environment) and take hot food. Daily exercise and walking was advised.

**Intervention and follow-up:**
Both the patient received following Unani compound formulations for 6 weeks.

- **Akseer Azraqui (AQ):** 20mg twice a day (Azraqui Mudaber (Strychnus Nux-Vomica Linn) 10 gm, sugar 250 gm).
- **Joshanda Munzij (JM):** As a decoction 100 ml twice a day (Aslussoos (Glycyrrhiza Glabra Linn), Unnab (Zizyphus Vulgaris, 5gm), Khatmi (Althea Officinalis Linn, 5gm), Khaksi (Sisymbrium Irio Linn, 5gm), Gauzaba (Borago Officinalis Linn, 5gm), Adhosa (Justicia Adhatoda, 5gm), Ustekhudos (Lavandula Stoechas, 5gm), Khubazi (Common Mallow, 5gm)).
- **Aseeq Momiyai (AM):** 5 mg twice a day (Shibb-e-yamani (Alum) 100gm and Shingraf (Cinnabar) 100gm).
- **Akseer Dimag (AD):** 20 mg twice a day (Magzkaddu shire (Lagenariasiceraria) 25gm and Sugar 225gm).
- **Habb-e-Balchad (HB):** 2 tablet twice a day (Balchadh (Nordostachys Jatamansi, 50gm), Aloversa 50gm, Kafoor (Cinnamomum Camphora, 50gm), Neem (AzadirachtaIndica, 50gm), Hilteet (Ferula Foetida Regel, 50gm).
- **Rogan-e-Farfune (Masiha):** Khardal oil (Brassica Nigra) 1lit, Farfune 20gm, lashan (Allium saivum) 50gm.
- **Aseeq Kahu (AK):** 20 mg twice a day (Tukhmekahu (Lactuca Sativa Linn) 25gm, sugar 225gm).
- **Aqirqrha (SpilanthesAcmella):** Bar-e-Mazug (Madugh).

In Unani system of medicine these formulations are used to treat clinical conditions such as Falij (Hemiplegia), Laqwa (Facial palsy), ZoFasaab (Weakness of nerves, Neurasthenia), Wajaulasaab (Neuralgia), Iqr-un-nisa (Sciatica), Sudda-e-uuroq (Obstruction in Vessels), Waja-ul-mafasil (Arthritis), Sara (Epilepsy). They were regularly taking antihypertensive drug once daily to control hypertension. The patient was followed up every 8 days to monitor his health condition for 6 weeks. The patient was supplied medicines from the dispensary of the hospital every 8 days to observe compliance to the therapy.

**Observation and outcome**
It was observed that patient had the complaints of difficulty in speech and swallowing at base line which improved after 8 days of treatment at first follow up. The other symptoms resolve till the end of the treatment and post treatment follow up period of 6 months. The vitals of the patient remained stable during course of observation and treatment. After 6 weeks of treatment, CT Scan of brain report as mentioned in legend 2 confirmed that there is resolving of haematoma. The kidney function (serum creatinine and blood urea...
DISCUSSION

In this case series, it was observed that the Unani regimen comprising of three formulation Akseer Azraqui, Joshanda Munzij, Akseer Momiyai, Akseer Dimag, Akseer Kahu, Habb-e-Balchad and Aqirqarha were effective and safe in the management of Falij (Hemiplegia). This Unani regimen was formulated keeping in mind the principles of treatment for nervous disorders as per therapeutic approach of Unani System of Medicine. Nervine tonic and Nervine stimulant are used for the management of nervous disorders. Falij (Hemiplegia) is completely due to stroke in both the cases. The effectiveness of the Unani regimen in these cases might be explained in terms of pharmacological actions of the formulations which mainly nerve stimulating, anti-hemorrhagic, anti-inflammatory activity, cardio-protective activity, hypotensive, diuretic, immune tonic, rejuvenative, anti-parkinson activity, Concoctive of Phlegmin, Neuroprotective activity and anti-coagulation activity and vascular dilator properties present in their ingredient. The affected part was paralysed at baseline but after 6 weeks of treatment, the hand and leg becomes almost normal. There was no complaints of weakness and disability.

AkseerAzraquiand AkseerMomiyai: this compound is useful as Muqawwi-i-A’sab (nerve tonic) and Muharrik-i-A’sab (nerve stimulant) in USM. Both cases are hypertensive and having hematoma in brain of different size, Shibb-e-yamani (Alum) one of its ingredients possess hemostyptic, detergent and diuretic properties. The study conducted by Al-abbasi M A, demonstrated Anti-Hemorrhagic properties of alum. But the mechanism by which alum stop bleeding is not clearly understood. Hence these compound effective in both case of Falij (hemiplegia).

Joshanda Munzij: Contain Glycyrrhiza Glabra Linn the study conducted by Ojha et al. evaluated the cardioprotective effect of Glycyrrhiza Glabra against ischemic reperfusion injury. Another study carried by chakravathikk et al showed memory enhancing property. The study conducted by Al-Snafi demonstrated that hypotensive activity of Cordia Myxa. Unripe fruit of Cordia Myxa decreased rabbit blood pressure due to activation of parasympathetic ganglia and dilation of peripheral blood vessels. Another study showed neuroprotective effect (reperfusion of cerebral tissues in focal necrosis 200 mg/kg), memory enhancing and reduce cerebral oedema in brain stroke (100-400 mg/kg) of Lavandula Stoechasoil.

Habb-e-Balchad: The study conducted by SAHU Ret al showed effectiveness of Nordostachys Jatamansi in focal ischemia by its antioxidant property. The study carried out Mahendra P. demonstrated that antihypertensive effective, vasodilation effect and neuroprotective effect of Ferula Foetida Regel.
Aseek Kahu: Tukhmekahu (*Lactuca Sativa Linn.*) Intermediate polarity fraction of *L. sativa* ethyl acetate fraction exerts neuroprotection against glucose/serum deprivation (GSD)-induced cell injury, an in vitro model of brain ischemia can be used in common neurodegenerative disorders such as stroke.\(^\text{11}\)

**CONCLUSION**

Falij (Hemiplegia) is a Nervous system disorder. According to the Unani concept, many factors are responsible such as stroke and *fasadmizajbarid.* Effective management is resolving symptoms and countering the recurrence of the disease. The affordability, availability, and side effects of prolonged use of allopathic drugs remain a challenge and concern. The discovery of safer and more effective anti-hemiplegic drugs remains an area of active research at present. Excellent tolerance and acceptability were observed in a patient without any reported side effects. These results indicate that Unani compound formulations produce significant improvements in subjective and objective parameters and CT Scan. Hence, it may be concluded that the above drugs can be used safely and effectively for the treatment of Hemiplegia. Randomized clinical trials are needed to reveal a new and novel therapeutic option for satisfactory treatment of hemiplegia through Unani classical drugs.

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