

MANAGEMENT OF FACIAL PALSY (LAQWA) THROUGH UNANI MEDICINE: A CASE SERIES

Ifra Abdul Qaiyyum^{1*}, Sameena Abdul Qaiyyum², Mohd Afsahul Kalam³

¹Assistant Professor in Dept. of Moalajat (Medicine) at

Mohammadia Tibia College & Assayer Hospital Mansoor, Malegaon

²Assistant Professor in Department of pharmacology at RMS Institute of Pharmacy

³Research officer (Unani) Regional Research Institute of Unani Medicine, Kashmir University Srinagar

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ABSTRACT

Laqwa (facial palsy) is the most common cranial nerve motor neuropathy and it results in a characteristic facial distortion that is determined in part by the nerves branches involved. In majority of cases the cause is idiopathic. Rabban Tabri has originally described facial palsy entitled it as "*laqwa*" and explained its treatment. Thousands of people each year develop facial paralysis, a relatively common disorder with many different origins (infectious, traumatic, neoplastic, inflammatory, metabolic or idiopathic). The annual incidence has been estimated to be approximately 70 cases per 100,000 populations. Incidence of unilateral facial paralysis is 1,000 cases per 5 million populations per year. Unani scholars from various part of the world have been treating this condition since centuries successfully. Improvement of facial muscle function begins within first 3 weeks after onset of disease. Different effective regimes are available in Unani system of medicine (USM) for the treatment of *Laqwa* (facial palsy). Those treatments are effective and having fewer side effects. In the present paper the case studies of two male patients suffering from *Laqwa* (facial palsy). After series of investigation no definitive etiology could be traced out, hence considered as unilateral Facial palsy of left side, treated with Unani formulations is reported. This case series documented the successful treatment and prevention of recurrence of *Laqwa* (facial palsy) through Unani medicines. It concluded that the Unani regimen was effective and safe in the management of *Laqwa* (facial palsy). In most cases, Bell's palsy has a good prognosis and the patient will recover with outpatient therapy without complication.

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Keywords: Cranial nerves, Facial palsy, *Laqwa* (facial palsy), Neuropathy, Unani system of medicine.

INTRODUCTION

In early century of Common Era, many Arab and Unani physicians described facial palsy. Rabban Tabri has originally described facial palsy entitled it as *Laqwa*. The term "*Laqwa* (Facial paralysis)" was derived from the name of a bird "*Uqab*" due to the similarity of the facial appearance of the patient. Razes was the first scholar who explained the pathophysiology, clinical presentation, and possible treatment of facial paralysis. He has also mentioned the prognostic comments of this disease based on duration and severity. He also wrote a complete chapter on facial distortion, spasm, and paralysis in his book (*Al-Hawi*). He differentiated facial palsy from a hemifacial spasm for the first time in medical history. According to him, the symptoms start

abruptly and half of the face sags, paralyzes, disfigures and deviates to the normal side means if the muscle of left-side of the face is involved, the lip is turned to the right side and jaw and cheek of the affected part also deviate to the unaffected side. Facial paralysis is also known as '*Safasmus*', '*Farbifus*', '*Aframus*' i.e. "spasmodic musculous cranious" or "spasmodic phrenicaus cranious" that means spasm in muscles of head may be due to viscid humor (black bile) that diverge towards the affected side. It is supposed in the Greek Arab system of medicine that, excess of dryness (*Yaboosat*) in the body may also lead to *Laqwa*. First medical studies of the disease should be attributed to Avicenna. He was the first to record the differences between central and peripheral facial paralysis.¹ Facial

*Corresponding author: dr.ifraabdulqaiyyum@gmail.com

palsy is an acute onset of peripheral facial neuropathy and most common cause is lower motor neuron facial palsy.² Facial nerve paralysis is classified as central type or peripheral type,³ depending on the level of nerve injury. Central type results in paralysis of the lower part of the facial muscles on the opposite side of the lesion. The upper facial muscles are spared due to bilateral cortical connections. The peripheral type (lower motor neuron) lesion produces total facial paralysis on the same side of the lesion.⁴ Thousands of people each year develop facial paralysis, a relatively common disorder with many different origins (infectious, traumatic, surgical procedures, neoplastic, inflammatory, autoimmune reaction, metabolic or idiopathic), which can result in weakness of the muscles of facial expression. In majority of the cases, the cause is idiopathic and most patient improve completely with outpatient therapy in 3 weeks without complication. Herpes viruses seemed to be the most possible infection agent.⁴ Lower motor neurone (LMN) facial palsy is characterized by unilateral paralysis of all muscles of facial expression for both voluntary and emotional responses.⁵ The human facial nerve is the seventh cranial nerve (CNVII) and comprises motor, sensory and parasympathetic components. The facial nerve (CNVII) plays a critical role in multiple complex functions of human life including mastication, speech, and successful social communication through expression of mood and emotion.⁶

There are various methods to diagnose facial palsy such as the House-Brackmann Grading System (H-B scale), Yanagihara Grading Scale (Y-system), and Weighted Regional Grading System (FEMA) are used. Commonly H-B scale and Y-system are mainly used in the clinical field. In conventional medicine for treatment of facial palsy includes corticosteroids or antiviral agents, and surgery.³

Case 1: Patient information and clinical finding: A 19-year-old male patient visited to the Mohammadia Tibia College & Assayer Hospital (Mansoor), Malegaon in outpatient department, with complaints of Deviation of angle of mouth on left side, weakness of muscles of the left side of the face, unable to close the eyes, watering from the eyes, loss of taste, unable to chew, dribbling of water or saliva from the affected side of face, slurred speech from 8 days. The patient is well before 8 days ago then she developed sudden onset of headache followed by sudden weakness of muscles of left side of the face.

On Examination: A 19-year-old female was 160 cm tall

with weight 60 kg so BMI is 23.4 kg/m². The heart rate was 84/min while B.P was 110/70 mm Hg with 98.6 F temperature, respiratory rate was 20/min. The heart, lung, abdomen and renal system were normal. Pallor was present and jaundice and cyanosis were absent. He was unmarried male taking mixed diet but appetite was reduced hence bowel habit not cleared with reduced frequency and quantity of micturition. 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 12th were normal in their function except 7th cranial nerve (facial nerve) is affected (watering from the eyes, unable to close the eyes). 1) Forehead frowning - not possible on left side of face. 2) Eyebrow raising - not possible on left side. 3) Eye closure - left eyeball moves upwards and outwards when the patient attempts to close it along with incomplete closure of eyelid. (Bells phenomenon). 4) Teeth showing - not possible in left side denture. 5) Blowing of cheek - not possible in left side. 5) Nasolabial fold - Nasolabial fold loss on left side. 6) Taste perception - affected on left side. 7) Dribbling of saliva - Dribbling of saliva on left angle of mouth and Spilling of food contents during eating from left side. 8) Bells phenomenon - present on left side. 9) Deviation of mouth towards right side. In left side of the body **sensory system** is slightly low as compare to right side of the body. Patient has sensation with pin and blunt objects, temperature sense (hot and cold), Vibration sense (tuning fork) and patient was able to identify the position of finger or toe of left side of body. Superficial reflexes (plantar reflex, abdominal reflexes and Wartenbergs sign) were normal. Deep reflexes (Biceps, triceps, ankle, knee and finger flexion, supinator reflexes) were normal of the body. Muscle tone was diminished in left side of face. Cardiovascular system (CVS) was normal on inspection. Apex beat is palpable in 5th ICS without 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, no fluid trill and shifting dullness. Bowel sound was 5-7t/minute.

Case 2: Patient information and clinical finding: A male patient of 34 year's old male patient visited to the Mohammadia Tibia College & Assayer Hospital

(Mansoor), Malegaon in outpatient department, with complaints of Deviation of angle of mouth on left side weakness of muscles of the Left side of the face, unable to close the eyes, watering from the eyes, loss of taste, unable to chew, dribbling of water or saliva from the affected side of face, slurred speech from 5 days. The patient is well before 5 days ago then she developed of sudden onset of headache followed by sudden weakness of muscles of left side of the face.

On Examination: A 34 year old female was 156cm tall with weight 75kg so BMI is 30.8 kg/m². The heart rate was 88/min while B.P was 130/70 mm Hg with 98.6 F temperature, respiratory rate was 20/min. The heart, lung, abdomen and renal system were normal. Pallor was present and jaundice and cyanosis were absent. He was married male taking mixed diet but appetite was reduced hence bowel habit not cleared with reduced frequency and quantity of micturition. 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 12th were normal in their function except 7th cranial nerve (facial nerve) is affected (watering from the eyes, unable to close the eyes). 1) Forehead frowning - not possible on left side of face. 2) Eyebrow raising - not possible on left side. 3) Eye closure - left eyeball moves upwards and outwards when the patient attempts to close it along with incomplete closure of eyelid (Bells phenomenon). 4) Teeth showing - not possible in left side denture. 5) Blowing of cheek - not Possible in left side. 5) Naso-labial fold - Naso -labial fold loss on left side. 6) Taste perception - affected on left side. 7) Dribbling of saliva – Dribbling of saliva on left angle of mouth and Spilling of food contents during eating from left side. 8) Bells phenomenon – present on left side. 9) Deviation of mouth towards right side. In left side of the body **sensory system** is slightly low as compare to right side of the body. Patient has sensation with pin and blunt objects, temperature sense (hot and cold), Vibration sense (tuning fork) and patient was able to identify the position of finger or toe of left side of body. Superficial reflexes (planter reflex, abdominal reflexes and Wartenbergs sign) were normal. Deep reflexes (Bicep, triceps, ankle, knee and finger flexion, supinator reflexes) were normal of the body. Muscle tone was diminished in left side of face. Cardiovascular system (CVS) was normal on inspection. Apex beat is palpable in 5th ICS without 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, no fluid trill and shifting dullness. Bowel sound was 5-6t/minute.

Diagnosis: The patient was diagnosed on the basis of symptoms and cranial nerve examination other cranial nerves V, VI, IX and X were intact. Patient was diagnosed as having facial palsy (unilateral facial nerve paralysis) of the left side (lower motor neuron lesion) with the House-Brackmann facial nerve grading as Grade IV – moderately severe dysfunction. The investigations Haemogram, Liver Function Test, Kidney Function Test and Urine analysis were performed at base-line and post treatment were within in normal limits.

Dietary restrictions: Patient was advised to restrict Beef, Meet, chicken, oily food, spicy food and fried food. Avoid using 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 4 weeks.

- **Akseer Azraqi (AQ):** 20 mg twice a day (Azraqi Mudaber (*Strychnus Nux-Vomica Linn*) 10 gm, sugar 250 gm).⁷
- **Joshanda Munzij (JM):** As a decoction 100 ml twice a day (Aslussoos (*Glycyrrhiza Glabra Linn*, 5gm.), Unnab (*Zizyphus Vulgaris*, 5gm), Sapista (*Cordia Myxa*, 5gm), Khatmi (*Althaea Officinalis Linn*, 5gm), Khaksi (*Sisymbrium Irio Linn*, 5gm), Gauzaba (*Borago Officinalis Linn*, 5gm), Adhosa (*Justicia Adhatoda*, 5gm), Ustekhudoos (*Lavandula Stoechas*, 5gm), Khubazi (*Common Mallow*, 5gm)).⁷
- **Akseer Momiya (AM):** 5 mg twice a day (Shibb-e-yamani (*Alum*) 100gm and Shingraf (*Cinnabar*) 100gm).⁷
- **Habb-e-Balchad (HB):** 2 tablet twice a day (Balchadh (*Nordostachys Jatamansi*, 50gm), Alovera 50gm, Kafoor (*Cinnamomum Camphora*, 50gm), Neem (*Azadirachta Indica*, 50gm), Hildeet (*Ferula Foetida Regel*, 50gm).⁷
- Ø **Rogan-e-Farfune (Masiha):** Khardal oil (*Brassica Nigra*) 1lit, Farfune 20gm, lahsan (*Allium saivum*) 50gm.⁷

➤ **Aqirqarha** (*Spilanthes Acmella*): Bar-e-Mazug (Madugh).⁸

In Unani system of medicine these formulations are used to treat clinical conditions such as *Laqwa* (Facial palsy), *Zofe Asaab* (Weakness of nerves, Neurasthenia), *Falij* (Hemiplegia), *Wajaul asaab* (Neuralgia), *Irq-un-nisa* (Sciatica), *Sudda-e-urooq* (Obstruction in Vessels), *Waja-ul-mafasil* (Arthritis), *Sara* (Epilepsy). The patient was followed up every 8 days to monitor his health condition for 4 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 within 15days and post treatment follow up period of 1 month. The vitals of the patient remained stable during course of observation and treatment. Complete blood picture, the kidney function (serum creatinine and blood urea nitrogen) and liver function profile (SGOT, SGPT, Serum Alkaline Phosphatase, Serum bilirubin) at base line and post treatment were within normal. It was also observed that there no adverse drug reaction during the treatment period.

Comparison of subjective parameters:

House Brackmann Scale:

Parameters	Before	After 7 days	After 15 days
Deviation of mouth towards right side	Grade IV	Grade 2 – Slightly deviated Decreased By 20%	Normal
Unable to blow the Cheeks	Grade II	Grade 1 – Poor cheek bulge	Normal
Improper closer of Eyes	Grade IV	Grade 2 – Slow but complete eye closer	Normal
Lift up eyebrows	Grade IV	Grade 2 –Mild range of elevation	Normal
Smiling sign	Grade III	Grade 2 – Month angle rises no lip arching on weak	Normal

Case 1 photographic Assessment:



Case 2 photographic Assessment:



DISCUSSION

Facial nerve paralysis is the most common neurological disorders affecting cranial nerves. It results in a characteristic facial distortion that occurs to form of loss of facial expression. In this case series, it was observed that the Unani regimen comprising of three formulations *Akseer Azraqi*, *Joshanda Munzij*, *Akseer Momiyai*, *Habb-e-Balchadh* and *Aqirqarha* were effective and safe in the management of *Laqwa* (facial palsy). This Unani regime 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. 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, rejuvenates, anti-Parkinson activity, Concoctive of Phlegmin, Neuroprotective activity and anti-coagulation activity and vascular dilator properties present in their ingredient. The face was paralyzed at baseline but after 2 weeks of treatment, the face becomes almost normal. There were no complaints of weakness and disability.

Akseer Azraqi and Akseer Momiyai: this compound is useful as *Muqawwi-i-A'sab* (nerve tonic) and *Muharriki-i-A'sab* (nerve stimulant) in USM.⁷

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 chakravathi kk 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 Stoechas* oil.⁷

Habb-e-Balchadh: The study conducted by SAHU R et 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*.⁷

Aqir-e-Qarha: The study conducted by Badhe SR, et al. showed that root extract of *Anacyclus pyrethrum* produces antidepressant activity. Ethanolic root extract of *Anacyclus pyrethrum* showed an anticonvulsant activity investigated by Mandgary A et al. *Anacyclus pyrethrum* was also significant muscle relaxant activity in dose dependent manner. Ronald DC et al. was investigated a Memory Enhancing activity of *Anacyclus pyrethrum*. Another study the ethanolic root extract of *Anacyclus pyrethrum* (50-200 mg/kg) was increased level of cholinesterase in brain. Therefore, it increases activity of memory in scopolamine induce amnesia in albino rat through enhancing central cholinergic neurotransmission.⁸

CONCLUSION

Laqwa (facial palsy) is a Facial nerve paralysis is the most common cranial nerve motor neuropathy. In majority of the cases, improvement of facial muscle function begins within first 3 weeks after onset of disease. Bell's palsy usually has a good prognosis and participant will improve with outpatient therapy. According to the Unani concept, many factors are responsible such as *fasad mizaj barid*. 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. Hence, it may be concluded that the above drugs can be used safely and effectively for the treatment of *Laqwa* (facial palsy). Randomized clinical trials are needed to reveal a new and novel therapeutic option for satisfactory treatment of *Laqwa* (facial palsy) through Unani classical drugs.

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