



UNANI CONCEPT AND MANAGEMENT OF *HUMMA E DANAJ*(DENGUE FEVER) : A REVIEW

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ABSTRACT

Dengue fever, also known as *Humma Danaj*, is a viral illness carried by mosquitoes that is a major worldwide health concern. Over the past fifty years, the incidence has increased as it has spread geographically to new nations and, in the current decade, from urban to rural regions. An estimated 50 million people have dengue Every year, almost 2.5 billion individuals reside in dengue-endemic nations, where illnesses are common. Dengue fever (*Humma Danaj*) has no particular therapy in any medical system, and there is still work to be done on the dengue vaccine. However, there are treatments for the symptoms of dengue fever and ways to increase platelet counts. Both contemporary medicine and the *Unani* system of medicine employ a number of techniques to achieve this goal of treating dengue fever symptoms and raising platelet counts. Thus, all of the metrics from both a *Unani* and a contemporary standpoint have been covered in this article.

Keywords: Dengue fever; *Humma Danaj*; Platelets count; *Unani* medicine. *Wabā`īAmrāz*

INTRODUCTION:

Aedes mosquito-transmitted flavivirus is the cause of dengue fever (*Hummā Danj*), an acute febrile disease characterised by an immediate onset of high grade fever, severe muscle and joint aches, and headaches.^{1,2,3,4} Between 1960 and 2010, the incidence of dengue rose thirty times, mostly as a result of increasing international travel, urbanization, population expansion, and global warming.^{5,6} More than 110 nations have an endemic case of dengue.⁷ Every year, it infects between 50 and 390 million individuals globally, resulting in 25,000 fatalities and 500,000 hospital admissions. It was projected that 12 Southeast Asian nations will have around 3,000,000 infections and 6,000 fatalities each year throughout the 2000s.⁸ All four serotypes of dengue fever are present in large amounts in India, where the frequency of the disease is rising daily.⁹ It is one of the experiences *Wabā'īAmrāz* had in the past and is dealt with according to other *Wabā'īAmrāz* patterns. In *Unani* medicine, the prevention and treatment of *Wabā'īAmrāz* have been well-recited. Conventional medicine states that one of four closely related but antigenically different viral serotypes (DEN-1, DEN-2, DEN3, and DEN-4) of the genus *Flavivirus* causes dengue and Dengue Hemorrhagic Fever (DHF).^{10,11}

Epidemiology and Disease Burden

A well-known endemic infectious illness of tropical nations, dengue is quickly spreading around the world. Four serotypes of the dengue virus infect people, and it is spread by female *Aedes* mosquitoes. Dengue fever can range in severity from a low-grade fever to severe cases of shock syndrome and dengue hemorrhagic fever.¹²

Alternative Names

Onyong Nyang Fever, West Nile Fever, Break Bone Fever, Dengue like Disease, Dandy Fever,¹³ *Abul Rakab*, *Humma Saliba*.¹⁴

Historical Background

The first known account of a disease resembling dengue was discovered in a 992 AD Chinese medical encyclopaedia. outbreaks in 1699 AD in Panama and 1635 AD in the West Indies. Madras, India, saw the first known epidemic of a clinical dengue-like sickness. In 1903 AD, it was documented that dengue disease could be spread by mosquitoes. The current age of dengue research started in 1943 and 1944 when dengue viruses were identified in laboratory mice. In 1944, Albert Sabin discovered the dengue virus. There were initially just two varieties of dengue viruses, known as types I and II. Philippine haemorrhage fever was linked to dengue in 1956 when kinds 3 were found.^{9,15}

Unani Concept of Dengue Fever

Although there isn't a mention of Dengue fever in *Unani* literature, other fever forms are covered in great depth. This illness is most likely "*Humma Damwi Ufooni*," in which *ufoonat* causes skin rashes (*surkh daane*) and is detected in blood (*khilt-e-dam*).¹⁶ According to Sheikh *Ibne Sina*, infectious material (*madah afna'h*) causes aberrant changes in fluids and humours, disrupting the fluids' natural activities and personal traits. Sometimes infections of the humours (*Akhlat*) occur extravascularly (*kharij-eurooq*) and intravascularly (*dakhil-e-urooq*).

However, in this instance, intravascular (*dakhil-e-urooq*) infection is discovered as a result of the bite of the *Aedes aegypti* vector, which spreads the illness through blood transfusion.

Dengue Virus

Dengue viruses are round, spherical particles with a diameter of around 50 nm. It has a lipid bilayer around a single plus strand of RNA. The composition of mature viruses is 17% lipid, 9% carbohydrate, and 6% RNA. Flaviviruses are easily rendered inactive by organic solvents and detergents due to their lipid envelope. The primary surface protein of the virus, the E protein, presumably interacts with viral receptors to mediate the fusion of the virus membrane with the cell membrane. This protein is often recognised by antibodies that neutralise viral infectivity, and virulence can be impacted by mutations in the E protein. M protein is a little proteolytic fragment that is crucial to the virus's development into an infectious form. A nucleocapsid's component is the C protein.^{5,17}

Vector

The stegomyia family of mosquitoes spreads dengue viruses. The main vector is the daytime biting mosquito *Aedes aegypti*, from which all four virus variants have been isolated. Tiger mosquitoes, or *Aedes* mosquitoes, are identified by their black bodies with white stripes. Their inability to fly more than 100 metres (110 yards) makes it easier to eradicate. They lay cigar-shaped eggs, which they deposit singly. The female mosquito serves as the carrier.^{5,18,19,20}

Pathology

Rarely, intracranial or gastrointestinal haemorrhages may be the cause of mortality. Haemorrhages occur in the upper gastrointestinal tract, pericardium, intraventricular septum of the heart, and subserosal surfaces of the main viscera. Focal haemorrhages are sometimes observed in the liver, adrenal glands, subarachnoids,

and lungs. The liver is often enlarged and frequently exhibits fatty alterations. Serous cavities contain yellow, watery effusions that may have a blood tint. Under a microscope, the spleen and lymph nodes are the sites of lymphoid and plasma cystoids cell growth as well as lymphocytolysis and lymphophagocytosis.^{21,22}

Classification and Clinical Features

Dengue fever is classified into three classes:

1. Classic Dengue fever
2. Dengue hemorrhagic fever (DHF)
3. Dengue Shock Syndrome (DSS)

Classic Dengue Fever

Acute onset often lasts 5-7 days, however it can last anywhere between 3 and 14 days. Numerous symptoms include rashes, nausea and vomiting, headaches, severe malaise, muscle discomfort, backache, pain in the limbs and eyes, and fever (continuous or saddle-back).^{23,24}

Dengue Hemorrhagic Fever

High continuous fever lasting two to seven days, hepatomegaly, bleeding from the mouth, nose, vagina, rectum, intracranial space, food tracts, and skin, a sharp decline in platelet counts, and a positive tourniquet test are the hallmarks of dengue hemorrhagic fever. Because to an increase in vascular permeability, there is plasma leakage.^{23,24}

Dengue Shock Syndrome (DSS)

Hypovolumic shock, a sharp drop in body temperature, clammy skin and chilly extremities, low blood pressure, and a weak, quick pulse are its hallmarks. The patient eventually enters shock and often passes away in 12 to 24 hours.^{22,24}

River fever are four arboviral illnesses that resemble dengue fever but do not cause a rash.^{29–30} Meningococemia, yellow fever, various viral hemorrhagic fevers, certain rickettsial infections, and other serious illnesses that may present with clinical

Differential Diagnosis

Differential diagnosis of dengue fever include leptospirosis, moderate yellow fever, scrub typhus, viral hepatitis, early stages of malaria, and viral respiratory and influenza-like illnesses. Colorado tick fever, sand fly fever, rift valley fever, and Ross

signs similar to dengue hemorrhagic fever are distinguished from dengue hemorrhagic fever..^{23,24}

Diagnosis and Clinical Management

The detection of viral genomic RNA, antigens, or the antibodies it elicits is often used to confirm dengue infection. The NS1 protein, which is produced from dengue-infected cells and first manifests in the circulation, is the target of antigen detection assays based on NS1 detection. A 3-in-1 test for simultaneous detection of NS1, IgM, and IgG is now available. Modern ELISA-based serological diagnostics for dengue detection are affordable and simple to use..^{1,2,11,12,24}

Management in Unani System of Medicine

Usool-e-Ilaj (Principles of Treatment)

Izala sabab (Treat the cause)

Aram karaein (Bed Rest)

Dafe Humma (Antipyretics)

Barid Mashroobaat (Use of fluids and juices)

Habis-e-dam advia (If haemorrhage)

Mulayyanat (If constipation)

Muqawwiyat Aam advia

Muwallid dam Advia

Dafe Humma (Antipyretics):

Qurs Humma 2 tab BD / *Qurs Tabasheer kafoori* 2tab BD or *Joshanda Malaria* ½ adad BD.²⁵

Barid Mashroobaat wa sayyal Aghzia:

Mau shaeer, *Sharbat Neelofer*, *Sharbat Banafsha*, *Sharbat Aaloo*, each 2 tola *Aabe kahoo*, *Aabe Anaar*, *Aabe Seb*, *Aabe Bahi*, *Arq-e-Mako*, *Arq-e-Kasni* each 4 tola.^{16,26}

Habis-e-dam advia:

Qurs Habis 2tab BD+ *Sharbat Injabar* 2 tola BD³⁵

Moaddelat-e- Dam:

Sharbat Unnab 2 tola BD or *Majoon Ushba* 6gm after meal.¹⁶

Muqawwiyat:

Khameera Gaojaban Anbari, *Khameera Marwareed*, *Khameera Sandal* each 6 gm BD

Muwallid dam advia:

Qurs Damvi 2 tab , *Qurs Sadaf* 2 tab, *Sharbat Faulad* 2 tola or *Sharbat Anarain* 2 tola after meal, or *Kushta Khabsul Hadeed* 4 chawal.¹⁶

Some other useful Single & Compound Drugs

Juice of papaya leaves (*Carica papaya* Linn) increases platelet count.

Raihan leaf (*Ocimum sanctum* Linn.) along with one black pepper (*Piper nigrum* Linn.) can help prevent an outbreak of dengue.

Fruits rich in vitamin C like *Amla* (*Phyllanthus emblica* Linn. Syn. *Emblica officinalis* Gaertn.) are advised as vitamin C helps in better absorption of iron.

Khurfa/ Baqla-e-Humaqa (*Portulaca oleracea* Linn) is prescribed as antipyretic drug.

Chiraitah Shereen has enormous medicinal activities in the reducing fevers. It is particularly recommended for dealing with convulsions with dengue.^{1,2,6,14,27}

Modern Treatment

There is no particular treatment; the main options are supportive care (symptom management), fever control, and pain management (avoid aspirin and other non-steroidal anti-inflammatory drugs as they raise the risk of bleeding and should not be used with steroids). reminding the patients to stay hydrated, particularly if they have a high grade fever.^{5,20,22}

Conclusion

Dengue fever is nowadays a major health problem across the world. Although no clear description of Dengue fever, is available in classical Unani text; but dengue fever can be managed on the basis of *Amraze Wabai*. In patients of Classic Dengue Fever, supportive Unani treatment for strengthening the *Quwa* (Faculties) may be given as an adjuvant therapy with allopathic treatment in order to shorten the duration of illness, and to relieve the symptoms following the acute illness like general weakness and depression. The record of the efficacy of the Unani drugs evaluated may be maintained.

Acknowledgement

We are very grateful to the library incharge of RRIUM,Srinagar for providing us literature.

Source of Funding: None

Conflicts of Interest: None

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