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Review Article

Description of *Hummā Danj* (Dengue Fever) in Unani and Conventional Medicine - A Review

Mohammad Aslam[1], Rubi Anjum[2], S Javed Ali[3], Sayeed Ahmad[4]

[1]Assistant Professor, [2]Professor & Chairperson, [4]PG Scholar, Dept. of Tahaffuzi wa Samaji Tib (PSM), F/O Unani Medicine, AMU Aligarh.
[3]Dept. of Moalejat F/O Unani Medicine, AMU Aligarh.

I N F O

Corresponding Author:
Mohammad Aslam, Dept. of Tahaffuzi wa Samaji Tib (PSM), F/O Unani Medicine, AMU Aligarh.
E-mail Id:
aslambums@gmail.com
Orcid Id:
https://orcid.org/0000-0003-4288-7765
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A B S T R A C T

Dengue fever (*Hummā Danj*) is an acute febrile illness caused by a *flavivirus* transmitted by the *Aedes* mosquito and characterized by sudden onset of high fever, severe muscle and joint pain, headache, lymphadenopathy etc. Currently, no vaccine is available for dengue fever, and disease control and prevention have mainly focused on vector control activities and surveillance that incorporates community participation. Despite vector control programs and heightened public awareness, outbreaks have occurred in several highly urbanized areas in certain areas across the globe. Although no clear description of Dengue fever is available in classical Unani text**.** But the disease entity is present in classical text under the caption of *Humma* due to *waba* and can be diagnosed as well as managed on the principles of *Amraze Wabai*. This review paper will encompass Unani medicine and conventional medicine view on *Hummā Danj* and its management through Unani Medicine.

Keywords: *Hummā Danj*, *Aedes* Mosquito, *Wabā'īAmrāz*, Dengue Fever

Introduction

Dengue Fever (*Hummā Danj*) is defined as an acute febrile illness that is caused by a *flavivirus* transmitted by the *Aedes* mosquito and it is featured by acute onset of high grade fever, extreme muscle and joint ache and headache[1,2,3,4] rashes, pain in throat, palpable lymph node.[2,3] It is one of the *Wabā'īAmrāz* went through in the past and dealt on the pattern of other *Wabā'īAmrāz.* Prevention and treatment of *Wabā'īAmrāz* has been well recited in Unani system of medicine. According to conventional medicine, dengue and Dengue Hemorrhagic Fever (DHF) are caused by one of four closely related, but antigenically distinct, virus serotypes (DEN-1, DEN-2, DEN3, and DEN-4), of the genus *Flavivirus*[5,6] an attack of dengue produces immunity for a lifetime to that particular serotype to which the patient was exposed but not for all serotypes; thus, it is possible to get dengue fever repeatedly. Till date, any vaccine is not available for dengue fever, and disease control and prevention have mainly focused on vector control activities and surveillance that incorporates community participation. Despite vector control programs and heightened public awareness, outbreaks have occurred in several highly urbanized areas in certain areas across the globe.[7]

Epidemiology and Disease Burden

Dengue is a well known endemic infectious disease of the tropical countries and is swiftly becoming a worldwide burden. Dengue virus has 4 serotypes and is transmitted within humans through female *Aedes* mosquitoes. Dengue disease varies from mild fever to severe conditions of dengue hemorrhagic fever and shock syndrome.[8]

Due to increased air travel across different countries of world and unwitting urbanization have led to heighten in the rate of infection and aided dengue to blow up its geographic and demographic dispersion.[8,9]

Dengue fever has become one of the most prevalent re-emerging mosquito-borne illnesses across the globe. Relative incidence of dengue has arises 30-fold in last fifty years. Recently, the disease is endemic to about more than 125 countries, largely developing countries, laying a danger to approximately 3.97 billion people per year. Current model of distribution of dengue has approximated 390 million infections per annum, and around 95 million cases occurred apparently. The Indian subcontinent is the epicentre of this fever.[8]

Condition in India

In developing countries like India, the hazard of dengue has shown a boost in recent years due to swift urbanization, lifestyle changes and poor water management including improper water storage practices in urban, peri-urban and rural areas, leading to proliferation of mosquito breeding sites. The disease is linked with a seasonal form i.e. after monsoon a peak in cases is observed. Though, in Gujarat and the southern states and the transmittance is perennial. According to recent reports the disease is endemic in around thirty states/ UTs. The case fatality rate was 0.22 per cent. The maximum numbers of cases were reported from Punjab followed by Tamil Nadu, Gujarat, Kerala and Andhra Pradesh. All the four serotypes i.e. dengue 1, 2, 3 and 4 have been isolated in India but at present DENV-1 and DENV-2 serotypes are widespread.[10]

Aetiology

The causative agent of Dengue Fever is dengue virus which belongs to genus *Flavivirus*. There are four serotypes of dengue virus - DEN-1, 2, 3 and 4; all produce a alike clinical syndrome and each and every one are transmitted by *Aedes aegypti* mosquitoes which bite in the daytime and breed in stagnant water.[2,11] Infection with one serotype provides life-long immunity to that serotype but not to the other three serotypes. Humans are infective during the first three days after disease (the viraemic stage). Mosquitoes become infective after about 2 weeks feeding on an infected individual and remain so for the rest of their entire lives.[2]

Signs and Symptoms

The incubation period is 4 to 6 days (range 3 to 14 days) after the mosquito bite.[2,6] Two clinical forms are recognized: Classic Dengue Fever and Dengue Haemorrhagic Fever (DHF).[2,6,12,13]

Asymptomatic or mild infections are common. The disease start is an acute illness of sudden onset with general symptoms such as severe headache, fever for 3 to 7 days, exhaustion, severe muscle and joint pain, loss of appetite, vomiting and diarrhoea, skin rash, bleeding usually from the nose and gums and swollen glands and rash. Dengue Triad is present which includes the fever, rash, and headache (and other pains) comprises of peculiar characteristic features of disease. Other symptoms are severe uneasiness and pain behind the eyes, and redness of palms and soles.[1,2,6,10]

Haemorrhagic manifestations may present in DHF, they include: A positive tourniquet test, Petechiae, Echymoses, Purpura, Bleeding per mucosa, GIT, or other site and Haematemesis or melaena. With above symptoms Thrombocytopenia <100,000/mm^3 is present.[2,6,10]

Complications

Minor bleeding from mucosal sites; cerebral haemorrhage or oedema; Rhabdomyolysis,[6] hepatitis; internal heamorrhage, Arthritis, Epistaxis etc.[14]

Unani Concept of Dengue Fever

In Unani texts, there is as such no direct explanation of Dengue fever is mentioned, although all categories of fever in general are discussed in detail. According to Unani concept possibly this disease is "*Humma Damwi Ufooni*", where *ufoonat* is found in blood *(khilt-e-dam*) and leads to skin rashes. Famous Unani scholar Ibn Sina stated that, there are abnormal alterations in fluids and humours due to infectious material (*madah afna'h*), this in turn disrupt the qualities and normal activities of the fluids and humours. Humours (Akhlat) are infected occasionally both intravascularly (*dakhil-e-urooq*) and extravascularly (*kharij-e-urooq*). But in this case, intravascular (*dakhil-e-Urooq)* infection is establish because of the vector *Aedes aegypti*, which bites and transfer the disease as blood borne disease. It is also to mention that Dengue strikes people having poor immunity.[1,11,14]

Preventive Measures for Dengue

Primary prevention of disease is presently promising only with vector control and individual protection from the bites of infected vector. The transmission of the virus to mosquitoes must be break to prevent the disease. For this, patients are advised to remain under cover of mosquito nets, until the second bout of fever is over and they are no longer contagious. To prevent the extent of dengue fever, prevention of the breeding of its vector, the *Aedes aegypti* mosquito is first priority. The *Aedes aegypti* mosquito is certainly recognizable by the distinctive black and white stripes on its body. *Aedes aegypti* becomes infected when it bites a person who happens to be carrier of the dengue virus and after about 8 to 12 days can transmit the virus while biting a healthy person. *Aedes aegypti* lay down eggs in minuscule containers such as tree holes, discarded cans, old tyres, bamboo ends and tidepools bearing small amount of water. The most effectual way to forbid Dengue Fever is

to block *Aedes aegypti*, the carrier of the causative agent. This can be achieved by eradicating the breeding grounds for the mosquito with the help of good environmental hygienic practices.[1,2,6,10]

The prevention of dengue requires control or abolition of the mosquitoes carrying the virus that causes dengue. In nations afflicted by dengue fever, people are advised to empty standing water from old drains, trash cans, and flower pots. Government initiatives to decrease mosquitoes also help to keep the disease in check, but are not enough. There is presently not any vaccine available for dengue fever. Following measures may found effective in controlling the disease:[2,6,10]

Individual protection and the environmental controlling of mosquitoes are important in preventing illness. If one is living or travelling in tropical areas where dengue fever is common, these tips may help reduce risk of mosquito bites. Some useful and easy steps are:[1,2,6,8,10]

- Maintain all waste pipe of home free from choking off.
- Water in jars and bowls should be changed on every third day.
- Take out and change water from pots on every or alternate days.
- Tump over all water storage instrumentations.
- Cover all instrumentations that can hold water.
- In good order dispose objects that are capable to accumulate water such as empty-bellied lunch boxes, cans and glass bottles.
- Open blockages and place insecticide in roof gutters every month.
- Put on protective dress to prevent mosquito bites. Outwear long clothes such as long trousers and full sleeve shirts, socks and shoes.
- For personal protection, use mosquito repellent sprays that contain DEET when visiting places where dengue is endemic.
- Limiting exposure to mosquitoes by avoiding standing water.
- Remaining indoors during two hours after sunrise and before sunset will help.[1,2,6,8,10]

Diagnosis and Clinical Management

Dengue infection is usually confirmed by identification of viral genomic RNA, antigens, or the antibodies it elicits. Antigen detection tests based on NS1 detection have been designed to detect the dengue viral NS1 protein which gets released from the dengue infected cells and appears early in the bloodstream. A 3-in-1 test for simultaneous detection of NS1, IgM, and IgG is now available. Advance ELISA-based serological tests are easy to carry out and are cost-effective for dengue detection.[1,2,6,8,10]

Till date, there is no antiviral drug available for disease. Management is usually based on symptoms and is achieved through medical support. For uncomplicated cases of dengue fever, the treatment recommended is bed rest, oral rehydration, and paracetamol as an antipyretic and analgesic. Patient's health is supervised through various blood tests from fever day onwards till the condition recovers.[1,2,6,8,10]

Clinical Signs that Signal Progression to Serious Disease

Cold limb extremities, low pulse, low urine output, signs of mucosal bleeding, and abdominal pain. DHF is indicated by a rising hematocrit (≥20%) and a falling platelet count (>100,000/mm). In case of any of above mentioned signs are spotted, instantaneous hospitalization is necessary.

Treatment for DHF patients is established on intravenous fluid therapy to retain effective circulation during plasma leakage along with careful clinical monitoring of hematocrit, platelet count, pulse rate and blood pressure, temperature, urine output, fluid administered, and other signs of shock. Patients generally get better within 12-48 h of fluid therapy. Treatment for DSS patients mainly consists of instant fluid therapy with colloids and all-encompassing monitoring of any complications. In worse case such as internal haemorrhage, whole blood transfusion may be carried out.[1,2,6,8,10]

Management in Unani Medicine

Measures are applied to control the symptoms, limit the complexities and raise the platelets number.

Remotion of the cause (*Izala sabab* karaein) bed rest (*Aram* karaein) Antipyretics (*Daafae Humma*).

Employ of fluids and juices (*Barid Mashroobaat*) are advocated.

In case of bleeding tendencies use of Haemostyptic drugs (*Habis-e-dam advia*) are advised.

Use of laxatives (*Mulayyana*t) if constipation along with general tonics (*Muqawwiyat aam advia*) and Haematinic Drugs (*Muwallid dam advia*) are highly recommended.[1,2,6,11,14]

Mamoolat Matab

- Qurs Humma 2 BD or Qurs Tabasheer kafoori in dose of 2 BD or Joshanda Malaria.
- Use of fluids and juices.
- Haemostyptic Drugs (Habis-e-dam advia) : Qurs Habis 2tab BD+ Sharbat Injabar 2 tola BD.
- Blood Purifiers (Moaddelat wa Musaffiyat-e- Dam): Sharbat Unnab 2 tola BD or Majoon Ushba 6gm after meal.
- General Tonics (Muqawwiyat-e- A'am) : Khameera Gaozaban, Khameera Marwareed, Khameera Sandal

each 6 gm BD.

- Haematogenic Drugs (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.[1,2,6,11,14]

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.[1,2,6,11,14]

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.

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References

1. Siddiqui MY, Ahmad T, Siddiqui MMH. Amraze Mutaddi Wa Wabai. Published by Saba Publishers Zohra Bagh Aligarh Publishing year. 2003.
2. Anonymous. Prevention and Treatment of HummāDanj (Dengue Fever) In Unani Medicine Central Council For Research In Unani Medicine Ministry of AYUSH, Government of India, New Delhi. Pg 1-6. YNM.
3. Mathur JS. A comprehensive Textbook of Community Medicine Preventive and Social Medicine; edi I, 2008 CBS Publishers, New Delhi.
4. Suryakantha AH. Community Medicine with recent Advances; edi. (IV) 2017; Pub. Jaypee brothers Medical Publishers (P) Ltd. New Delhi.
5. Gubler DJ, Gary G. Clark National Center for Infectious Diseases Centers for Disease Control and Prevention Fort Collins, Colorado, and San Juan, Puerto Rico, USA Dispatches. 1995; 1(2): 57.
6. https://www.nhp.gov.in/unani-perspective-regarding-dengue-fever-humma-e-danaj_mtl.
7. JoãoBoscoSiqueira Jr., TurchiMartelli CM, Coelho GE, da Rocha Simplício AC, Hatch DL. Dengue and Dengue Hemorrhagic Fever, Brazil, 1981-2002. *Emerg Infect Dis* 2005; 11(1): 48-53.
8. Khetarpal N, Khanna I. Dengue Fever: Causes, Complications, and Vaccine Strategies ; Volume 2016, Academic Editor: Mario Clerici Published:20 Jul 2016. https://www.hindawi.com/journals/jir/2016/6803098/.
9. Lal S, Adarsh P. Textbook of Community Medicine Preventive and Social Medicine. Edi.(IV) 2014; CBS Publishers &distributors Pvt Ltd. New Delhi.
10. PARK K. Preventive and Social Medicine. 23rd ed. Jabalpur: Banarsidas Bhanot Publishers; 2015.
11. Nasir A, Siddiqui MY, Mohsin M, Ali W. Concept and Management of Dengue fever (HummaDanj) in Unani and modern Perspective. *JBSO* 2013; 1(4): 362-365.
12. Kamalam S. Essentials in Community Health Nursing Practice; edi.(II) Pub. Jaypee brothers Medical Publishers (P) Ltd. New Delhi.
13. Rahim A. Principles and Practice of Community Medicine. Edi.(I) 2008. Pub. Jaypee brothers Medical Publishers (P) Ltd. New Delhi.
14. Farahi H. Mabhas Hummiyat; edi.(I). Bharat Press Sitapur Lucknow. 1999.