



A REVIEW ARTICLE ON DENGUE (DANDAKJWARA)

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ABSTRACT

Dengue is caused by *Aedes aegypti* mosquito. Dengue is a viral disease that is similar in symptoms and etiology to the disease, Chikungunya. Dengue virus belongs to family Flaviviridae, having four serotypes that spread by the bite of infected *Aedes* mosquitoes. In allopathic, there is no treatment of this disease, treatment is based on the symptoms. In Ayurveda, Dengue fever is known as Dandakjwara which means joint pain that's why this is also called break bone fever. The symptoms of dengue and Dandakjwara are very similar. Ayurveda treatment provides relief for the disease.

KEYWORDS: Dengue, Virus, Fever, Dandakjwara.

INTRODUCTION

The word Dengue is derived from the Swahili phrase *Kadanga pepo*, meaning cramp-like seizure. Dengue fever is a disease caused by virus – The disease has also been termed “breaks that are transmitted to people by mosquitoes. Bone fever” or “dandy fever”. Four main characteristics are (i) manifestations of dengue illness and high fever lasting 2-7 days; (ii) hemorrhagic tendency as shown by a positive tourniquet test, petechiae or epistaxis.

Temperature is characterized by disturbance in normal functioning of the system. Separate chapter of Dandakjwara not available. But symptoms of *vatkaphaolban sannipatajjwara* are similar with Dandakjwara. It is an acute infectious disease. Fever suddenly rise and feeling very weak. Description of dengue as Dandaka Jwara is found in the *parishishta* chapter of *Madhava Nidana*. It has been described that a particular species of mosquito is the basic cause of spread of fever called Dandaka jwara. This fever mostly subsides within a week; however, it is more dangerous for the children and old people.

Causative factor (Nidan)

Main cause of Dandak jwara is *toga virus* which spread in body through *Aedes Aegypti* mosquito.

Premonitory symptoms (Purvarupa)

Angmard- bodyache, klam-tiredness without exertion, aruchi-anorexia, nausea, avsaad-depression.

Symptoms (Rupa)- Severe breaking pain in bone and joints. High temperature of 103 to 105 degrees F. may occur which gets subside and may relapse again within three to four days (Saddle back fever). On 8th day, it subsides on its own. Severe pains in bones, difficulty in walking, slow pulse, excessive weakness, low of appetite are common symptoms. During fever, pulse is not proportionately as fast as it should be with fever. Symptoms of common cold (*Pratishyaya*) cough and throat pain are also common symptoms of Dandaka jwara which becomes endemic due to virulence of *Kapha* and *vata dosha*.

Diagnosis

Diagnosis of DV infection is routinely done by demonstration of anti DV IgM antibodies or by NS-1 antigen in patients serum depending upon day of illness using ELISA kits. Molecular methods (reverse transcriptase PCR) are being increasingly used in diagnosis of DV infection. A single tube nested PCR for detection and serotyping of DV was developed and used for detection of co-infection by two viruses. DV isolation in tissue culture cells and its sequencing is also being done.

Prevention and Control

Prevention depends on control of and protection from the bites of the mosquito that transmits it. The primary method of controlling *A. aegypti* is by eliminating its habitats. This is done by getting rid of open sources of water, or if this is not possible, by adding insecticides or biological control agents to these areas. People can prevent mosquito bites by wearing clothing that fully

covers the skin, using mosquito netting while resting. However, these methods appear not to be sufficiently effective, as the frequency of outbreaks appears to be increasing in some areas, probably due to urbanization increasing the habitat of *A. aegypti*. 6 IN AYURVEDA, DENGUE FEVER (DANDAKA JWARA) Jwar (fever) is a large disease in Ayurveda which is described in broad spectrum.

Treatment

Non-availability of specific target drugs against dengue undoubtedly must be creating uncertainty in the minds of infected individuals. This situation not only creates panic in the patients but also puts pressure on clinicians who manage the disease. This also helped Indian society to find out alternative options for treatment and prevention of dengue. Various plants and their preparations have been used traditionally in different parts of India for combating dengue. Use of plants against dengue by herbal healers and local communities of North East plains, Goa, Madhya Pradesh. Different concentrations of neem extract were mixed with 100 LD₅₀ dose of virus in equal proportions and incubated for 1 h. 20 μ l of this mixture was inoculated intracerebrally in each mice pup. Clinical signs of dengue such as; weight loss, slow gait, inability to suck mother's milk and flaccid paralysis followed by death were observed for 5 days. Absence of clinical symptoms and virus specific amplicon was observed in the mice pups inoculated with test extract. The above study validates the efficacy of neem leaves in combating dengue and also supports the fact that single phytomolecule.

Evidence of efficacy of *C. papaya* in human against dengue infection has also been reported recently. In one study *C. papaya* leaf juice was extracted, filtered using traditional method and two table spoonfuls of juice was administered orally to 5 dengue patients three times per day after every 6 h interval. Platelet counts before and after the treatment were recorded. It was found that intake of *C. papaya* leaf juice resulted in significant increase in the platelet counts in the dengue.

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