



Plant medicines used in homoeopathy in treating dengue fever– An overview

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Abstract

Dengue is an acute viral disease caused by Flavi Virus (RNA virus) and the vector responsible is *Aedes Aegypti*. Clinical features may range from asymptomatic fever to complications such as hemorrhagic fever and shock. This article gives details about its Aetiology, Clinical Features, Investigations, Complications, and Homoeopathic medicines from plant sources to manage Dengue Fever.

Keywords: homoeopathy, dengue fever, break bone fever, plant medicines, herbs, botany

Introduction

Dengue Fever

1. Aetiology

The global incidence of Dengue has become a major threat in recent decades. Almost half of the people in the globe are at risk of getting infected. It is estimated that there will be 100-400 million infective cases each year [1]. One model study indicates the possibility of 390 million infections per year, of which 96 million cases might present clinically with any of the severity of the disease [2]. Another study estimates the prevalence of 3.9 billion people with a risk of getting infected. Although dengue is common in 129 countries, Asian countries have the highest burden of 70% [3].

Dengue is a mosquito-borne viral disease that is transmitted by female mosquitoes mainly of the species *Aedes aegypti* and, to a lesser extent, *Aedes albopictus* [4]. These mosquitoes are also responsible for the transmission of chikungunya, yellow fever, and Zika viruses.

The virus belongs to the Flaviviridae family which has four distinct serotypes namely (DENV-1, DENV-2, DENV-3, and DENV-4) [1]. There is also a possibility of maternal-fetal transmission [5].

2. Clinical Features

The incubation period is 5-6 days, following the mosquito bite. Asymptomatic or mild infections are common.

2.1. Mild Dengue

The patient can present with flu-like symptoms, Nausea, Vomiting, rashes in the skin, pain behind the eyeball, muscle aches, joint pains, and bone pain. Symptoms last for two to seven days [4].

2.2. Severe Dengue

Usually begins 24 to 48 hours when the fever subsides. Warning signs that indicate severe Dengue include pain in the umbilicus, vomiting with three episodes within 24 hours, bleeding from orifices like nose, gums, bloody vomiting,

and blood in the stool. Often the patient can turn restless, irritable with marked tiredness [4].

Severe Dengue can cause death because of leakage of plasma, fluid accumulation, respiratory distress, severe bleeding, or impairment of organs [1]. If left untreated complications can set in. The complications include internal bleeding, organ damage, hypotension leading to a state of shock. During pregnancy, if the mother suffers from dengue fever babies are at risk of preterm birth, low birth weight, and fetal distress [6].

3. Diagnosis

During the first week of illness, samples should be collected and they should be tested for serological and virological methods.

Virological method - to find out the genotype of the virus, RT-PCR from clinical samples can be used. NS1 - virus-produced protein may also be used to detect the virus [1].

Serological test - ELISA can detect recent and past infections, with IgM and IgG antibodies [1].

4. Treatment

Dengue has no specific treatment. Fever can be controlled by antipyretics and pain killers for muscle and joint pains. NSAIDs (Aspirin) should be avoided. Severe Dengue should be controlled by maintaining body fluid volume. Indication for Blood components, Blood Transfusion - Platelet count <25,000/cmm with bleeding is an indication for platelet-rich plasma or platelet concentrates. In massive bleeding give a blood transfusion [7].

Homoeopathically the common indicated medicines from Vegetable Kingdom for treating Dengue Fever includes *Aconitum napellus*, *Belladonna*, *Bryonia alba*, *Eupatorium perfoliatum*, *Gelsemium*, *Ipecacuanha*, *Nux vomica*, *Pulsatilla Nigricans*, *Rhus Toxicodendron* and *Rhus Venenata*. Medicines can be prescribed on symptom similarity [9, 10].

Table 1: List of Medicines, its common name and family

Sl.No.	Medicine Name	Common Name	Family
1.	Aconitum Napellus	Monkshood	Ranunculaceae ^[12]
2.	Belladonna	Deadly Nightshade	Solanaceae ^[13]
3.	Bryonia Alba	White Bryony	Curcubitaceae ^[14]
4.	Cinchona Officinalis	Peruvian Bark	Rubiaceae ^[15]
5.	Eupatorium Perfoliatum	Bone set	Asteraceae ^[16]
6.	Gelsemium Sempervirens	Yellow Jasmine	Loganiaceae ^[17]
7.	Ipecacuanha	Ipecac	Rubiaceae ^[18]
8.	Nux Vomica	Poison Nut	Loganiaceae ^[19]
9.	Rhus Toxicodendron	Poison Oak	Anacardiaceae ^[20]
10.	Rhus Venenata	Poison Sumac	Anacardiaceae ^[21]

Discussion

Dengue is one of the life threatening diseases, no vaccine has yet benefitted the humans. Since it is a life threatening disease care should be taken at the earliest to prevent morbidity and mortality. The medicines from the vegetable kingdom are safe while compared to harmful allopathic drugs. The list of medicines which have beneficial action over dengue fever is already proved and incorporated in Homoeopathic Materia Medica. Even though the therapeutic value of each drug is known it should not be self-administered. Because, the preparation of medicines is not done from crude form instead the guidelines given in Homoeopathic Pharmacopoeia should be followed. Also, the Principles of Homoeopathy has to be followed in selecting and administering the medicines to the patient. Hence knowledge of Botany is essential, which can help to identify the right herbs so that a genuine medicine can be prepared and it can be safely prescribed by Homoeopathic Physicians.

Research study also conducted in treating Dengue using Homoeopathic medicines in Brazil, Pakistan and Cuba. In Brazil during 2001, Dengue incidence was decreased by 81.5% after giving Eupatorium Perfoliatum in one group of residents when comparing to others who did not receive it as prophylaxis.

In Pakistan after taking Homoeopathic medicines in 25 Dengue patients, results in their blood values shown better results when compared to people who has taken standard treatment.

In Cuba during Dengue outbreak, around 25000 people were given homoeopathic medicines after taking it people did not report any severe symptom. They didn't even required any intensive care unit for severity. The hospital stay too improved to 3-5 days from 7-10 days ^[11].

Conclusion

The Homoeopathic medicines for Dengue Fever belong to Rubiaceae, Loganiaceae, Anacardiaceae, Asteraceae, Solanaceae, Ranunculaceae and Cucurbitaceae families. Further research can be conducted on those families to invent many other drugs which may be beneficial in controlling this life threatening disease.

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Conflicts of Interests

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