Evaluating the Efficacy of Homoeopathy in Managing Dengue Virus an Emerging Disease Outbreak as Major Global Health Epidemic. A Detailed Perspective on Treatment, Quality of Life, and Financial Implications in the Tropical Areas of the World



Dr. Don J Scott Berin G BHMS, (MD- HOM)
Author/Disciple
ORCID ID: 0000-0002-5636-2794
Department of Materia Medica
White Memorial Homoeo Medical College and Hospital
Veeyanoor, Attoor, Kanyakumari District,
Tamil Nadu, India.



Dr. V J Beautlin PrevincY BHMS, Professor
Co- Author /Guru
My Most Revered Guru Mam
MBA(Hospital Management) MD (HOM).
ORCID ID: 0009-0004-2586-7927
RESEARCHER ID: HNQ-9146-2023
Assistant Professor,

Department of Community Medicine, White Memorial Homoeo Medical College and Hospital Veeyanoor, Attoor, Kanyakumari District, Tamil Nadu, India.

Abstract:-

> Background:

Aedes aegypti is the vector for dengue, an acute viral disease caused due to the Flavivirus (RNA virus). Additionally prevalent in Africa, the Caribbean, and the Americas, it is native to South East Asia and India. The primary vector is the mosquito Aedes Aegypti, which breeds in stagnant water. In large cities, water-based air coolers, collections of water in containers, and tyre dumps provide ideal breeding grounds for the vector. Some nations in southeast Asia are hosts to the vector Aedes albopictus. The majority of dengue patients experience no symptoms, but some go on to experience an acute febrile disease, which can vary from a simple fever to dengue haemorrhagic fever (DHF) and shock. According to the WHO, there are numerous conventional and symptomatic treatment procedures available to address this issue, but Dengue will continue to be a major global health epidemic. In consideration of this, a large number of Homoeopathic medical professionals, institutions, and research institutions are using the Homoeopathic form of treatment in pursuit of an effective treatment for dengue. We may come to the conclusion that Homoeopathic medicines are effective in the treatment of dengue fever from clinical trials and research that produced efficacy data for dengue fever treatment with Homoeopathy.

Keywords:- Dengue Virus, Viral Disease, Aedes Aegypti, Homoeopathic Management.

I. INTRODUCTION

The four different types associated dengue virus (DENV) serotypes (referred to as DENV1, 2,3, and 4) are the causes of dengue infection. These single-stranded RNA viruses that cause dengue belong part of the family Flaviviridae and the genus Flavivirus, a group that also includes viruses that spread through vectors that are of

significant medical significance (e.g., West Nile virus, Yellow Fever virus, Japanese encephalitis virus, St. Louis encephalitis virus, etc.). Arboviruses, or arthropodborne viruses, like dengue are typically transmitted to people through the bite of an infected Aedes species mosquito. Transfusion of contaminated blood or transplantation of infected organs or tissues are further methods of transmission. occur with occupational exposure in hospital settings (such as injuries from needle sticks). A virus called dengue can be transmitted through a bite of an infected mosquito. In most tropical regions of the world, there are four different kinds of dengue viruses. The illness was formerly known as "breakbone fever" because it causes excruciating joint and muscle pain that makes bones seem to be breaking. Most occurrences in the US involve visitors coming back from abroad. A more serious kind of dengue is dengue hemorrhagic fever.

II. EPIDEMIOLOGY

While it comes to human mortality and morbidity, dengue is regarded as one of the most significant arthropodborne viral illnesses. A vital public health issue is dengue. It primarily affects urban and semi-urban areas in tropical and subtropical regions of the world. There are reports of an increase in dengue fever (DF) and dengue hemorrhagic fever (DHF) cases in Malaysia. Additionally, there is an upward tendency in the incidence rate, which increased from 44.3 cases per 100,000 people in 1999 to 181 cases per 100,000 people in 2007. This is exceeds the national goal of less than 50 cases/100,000 people for the incidence rate of DF and DHF. Nearly 95% of all documented cases of dengue fever are due to this disease. At the moment of notification, 40-50% of these infections were serologically identified as cases. Due to a scarcity of convalescent samples (following blood specimens) sent for confirmation, the seropositivity rate is rather low. The incidence rate is higher for people above the age of 15 years. The age groups that are employed and enrolled in school have the greatest incidence rates. Since 2002, there has been a spike in dengue-related mortality among adults. However, since 2002, the case fatality rates for both DF and DHF have maintained substantially below 0.3%. Urban areas (70 to 80 percent) accounted for the majority of dengue cases reported, where there is a large population density and rapid economic growth, both of which encourage dengue transmission.

> History:

An acute viral infection called dengue can have deadly effects. The term "water poison" initially used to dengue illness. The Swahili word "ka-dinga pepo," which refers to a "cramp-like seizure" brought on by an evil spirit, is where the name "dengue" originally came from. The Spanish term "dengue," which means fastidious or careful and would represent the gait of a person experiencing the bone discomfort associated with dengue infection, is where the Swahili word "Dinga" got its start. Only after 1828 the phrase "dengue fever" become popular. A female Aedes mosquito carrying the dengue virus bites a person to spread the virus. The four serotypes of dengue viruses, known as

DV-1, DV-2, DV-3, and DV-4, are members of the Flaviviridae family of viruses. on the year 2013 noticed the announcement of the fifth kind. Based on their antigenicity, the serotypes are distinguished from one another. A positive-stranded RNA virus known as the dengue virus has three structural protein genes that produce the nucleocapsid ore core (C) protein, a membrane-associated (M) protein, an enveloped (E) glycoprotein, and seven non-structural (NS) proteins. The virus spreads and infects both lymphoid and non-lymphoid tissues after a mosquito bite carrying the infection. The host enters an antiviral state with extensive interferon expression as the viral burden increases to the point where generalized clinical symptoms (fever, headache, and myalgia) appear. Any particular dengue virus (DENV) infection's clinical outcome is influenced by the host and viral factors. There is no doubt a physiological factor at play for the host that affects whether infection or (re-infection) has a benign outcome or ends in disease that appears throughout a severity gradient.

➤ Dengue Statistics in India:

Dengue cases in India increased by 11,832 in 2017 compared to 2016, and the disease's number of fatalities also increased. A total of 16,870 dengue cases were reported in the nation up through July 30, 2016, whereas 2,536 cases and 10 fatalities were reported during the same time period in 2017. Kerala reported the most dengue cases with 15,913 cases, followed by Tamil Nadu with 5,474 cases, Karnataka with 4,186 cases, Andhra Pradesh with 798 cases, west Bengal with 571 cases, and Maharashtra with 460 cases. The global impact of dengue is serious and constitutes a developing problem for the public health industry and policymakers. Dengue is currently expanding throughout the tropics, with high-risk areas being in the Americas and Asia. Over 70% of dengue illnesses occur in countries in Asia and the Pacific. India alone generated close to 34% of the global burden of infections. After adjusting for underreporting from a case study in the Madurai district, an expert Delphi panel calculated the number of clinically confirmed dengue cases in India from 2006 to 2012 as 5,778,406 cases on average per year, or 282 times the annual reported figure. According to annual reports, India's whole cost burden for medical care came to \$548 million US dollars.

➤ Aetiology

Flavivirus is the virus that causes dengue. The four viral serotypes of the genus Flavivirus (DEN-1, DEN-2, DEN-3, and DEN-4) are closely related but antigenically different. People who reside in a dengue-endemic area have a lifetime risk of four dengue illnesses since infection with one of these serotypes does not confer cross-protective immunity. The tropics are where dengue is most commonly found. The domestic day-biting mosquito Aedes aegypti, which prefers to feed on humans, and the viruses that cause it are maintained in a cycle including humans. Clinical illnesses caused by dengue virus infection range from a nonspecific viral sickness to a serious and lethal hemorrhagic disease. The patient's age, immunological condition, and genetic predisposition are all significant risk factors for DHF, as are the strain and serotype of the virus that is causing the disease.

> Symptoms and the Infection's Mechanism:

When an arbovirus-carrying mosquito bites a person, the virus is transferred to the new host and can cause dengue fever. Once inside the body, the virus makes its way to other glands where it grows. The virus may then enter the bloodstream. The blood vessels affected by the virus, particularly those that supply the skin, undergo alterations. The vessels enlarge and start to leak. Patches of liver tissue degenerate, and the spleen and lymph nodes grow. The molecules necessary for clotting are depleted through a process known as disseminated intravascular coagulation (DIC), which increases the risk of serious bleeding (haemorrhage). A period of incubation that lasts for roughly 5-8 days happens after the virus has been introduced to the human host. The virus increases in number at this time. The illness's fast onset of symptoms includes a high temperature, chills, headache, eye discomfort, red eyes, enlarged lymph nodes, a red flush to the cheeks, lower back pain, acute weakness, and excruciating aching in the legs and joints. About two to three days pass during this initial illness phase. After that, the patient starts to perspire a lot and the fever quickly goes down. The patient's temperature rises again after roughly a day of feeling rather good, however not as dramatically as the first time. Starting on the arms and legs, a little red bump rash moves to the chest, belly, and back. Rarely does it harm the face. The soles of the feet swell and turn bright red, as do the palms of the hands. The "dengue triad" is the name given to the defining trio of fever, rash, and headache. Although weakness and exhaustion may persist for several weeks after dengue fever, the majority of patients fully recover. Once a person has been exposed to dengue fever, their immune system continues to produce cells that guard against re-exposure for nearly a year.

> The Clinical Presentation

Classical Dengue, Dengue Hemorrhagic fever and Dengue Shock Syndrome

III. DENGUE CLASSICAL

The virus-carrying mosquito bite that causes mild dengue fever might cause symptoms to start showing up up to 7 days later. These symptoms include: body rash that can go and then reappear; high fever; an intense headache; pain behind the eyes; vomiting; and feeling nauseous. The majority of the time, moderate dengue does not cause significant or fatal complications, and symptoms normally go away after a week. Acute chills and high fever with a severe headache Retro-orbital pain accompanied by photophobia - Muscle and joint pain that limits movement. Extreme weakness, anorexia, constipation, changed taste perception, colicky abdominal discomfort, sore throat, and general depression are constitutional symptoms. - Intense myalgia and BREAK BONE FEVER are further symptoms. A typical morbilliform rash that, within the first 24 to 48 hours, spares the soles of the hands and the face, torso, and limbs.

> DHF, or Dengue Hemorrhagic Fever

Is more common in young females and children. The main risk factor is the presence of pre-circulating anti-

dengue antibodies. Trans-placental transfer or prior infection with a different serotype are both possible sources of acquisition. Due to increased capillary permeability, DHF experiences plasma leakage and extravasations in the endothelial gaps. Ailment's third to seventh day after onset. bleeding from the mouth, gums, or nose; clammy skin; damage to lymphatic and blood vessels; internal bleeding that can result in dark vomit, faeces, or stool; a lower number of platelets in the blood; a sensitive stomach; small blood spots under the skin; and a weak pulse. Without prompt treatment, DHF can be fatal.

➤ Guidelines for DHF Diagnosis

A 2–7-day fever or H/O fever. Any of the following signs of hemorrhagic tendencies: bleeding from the mucosa, digestive tract, injection sites, or other places, positive tourniquet test, Petechie, ecchymosis or purpura. Hepatic enlargement. Platelet count 1,00,000/mm3 in thrombocytopenia

➤ Hemo-Concentration:

- Hematocrit rose by more than 20%.
- Plasma leaking is confirmed
- A positive tourniquet test, or the formation of more than 20 petechiae per 2.5 cm2 on inflating the sphygmomanometer cuff for 5 minutes, indicates a rise in haemoglobin concentration > 20% and a fall in concentration > 20% after intravenous fluids.

> Dengue Shock Syndrome

Every DHF plus requirement Shock is characterised by tachycardia, a constriction of the pulse pressure (20 mmHg or less), a quick and weak pulse, as well as cold, clammy skin and restlessness.

Dengue Severity Levels

Fever and vague constitutional symptoms constitute. Grade I. A successful tourniquet test is the only hemorrhagic manifestation. The patient has spontaneous bleeding in grade II, typically in the form of cutaneous haemorrhage, in addition to the grade I symptoms. Grade III circulatory failure is characterised by a quick and weak pulse, constriction of the pulse pressure, or hypotension, along with clammy, cold skin and restlessness. Having a pulse and blood pressure that are both undetectable, grade IV is deep shock. A severe case of dengue is known as dengue shock syndrome (DSS). It might be fatal. Along with moderate dengue fever symptoms, the patient may also have: intense stomach pain, disorientation, and sudden hypotension, or a rapid drop in blood pressure. Heavy bleeding, frequent vomiting, and blood vessels that are leaking fluid This has the potential to be fatal without treatment.

• Shock Warning Signs

✓ Severe, ongoing abdominal discomfort - Constant vomiting - Restlessness or drowsiness - Sudden transition from fever to coldness with profuse perspiration.

• Clinical Characteristics:

A high fever, excruciating headache, and excruciating pain behind the eyes are among the basic dengue symptoms that manifest 3 to 15 days following a mosquito bite. An even more deadly kind of the disease is dengue hemorrhagic fever. Aside from these additional signs.

- ✓ Significant dehydration; abdominal pain; fever; exhaustion; loss of appetite; nausea; vomiting; tachycardia; prolonged capillary refill time
- ✓ Pale or mottled skin that is cool; alteration of one's mental state.
- ✓ Oliguria Sudden increase in haemocrit despite fluid administration.
- ✓ A decrease in pulse pressure (20 mmHg)
- ✓ Hypotension (a late finding indicative of untreated shock); • Pain in the retro orbital region behind the eye. Three to four days after the fever starts, rashes start to appear on the feet or legs.
- ✓ Muscle and joint pain as well as swelling
- ✓ Dengue fever is also known as "break bone fever" due to the body's joint agony.

➤ Dengue in Pregnant State:

Studies on the treatment of dengue in pregnancy are quite rare. In general, the clinical course and presentation of dengue in pregnant women are comparable to those in non-pregnant people. 118, Level 8; 117, Level 8; The signs and symptoms could, however, be mistaken for other pregnancy problems as toxaemia, hemolysis, elevated liver enzymes, and low platelets (HELLP syndrome).119, Level 9 There have been some reports of an increased prevalence of preterm, foetal deaths, and placenta abruptio in these women.v. 117, Level 8; 120, Level 8. The following physiological changes in pregnancy may make it difficult to diagnose and evaluate plasma leakage.

• Treatment of Infected Patients who are Pregnant Just before Delivery:

The critical phase (the time when plasma leaks out) is when bleeding risk is at its peak.

Prevent LSCS or induction of labour during the critical phase (plasma leaking) if at all possible.119, Level 9. During this crucial stage, avoid procedures or movements that could induce or increase labour. A multidisciplinary approach to the mother's care should be offered in a hospital department with staff who are qualified to manage childbirth and its difficulties. Following delivery, the infant needs to be checked for vertical dengue transmission.

IV. COMPLICATIONS

Bleeding, ARDS - Renal failure, Liver disease, Encephalopathies

➤ Diagnosis

Laboratory testing are necessary for a dengue infection diagnosis. For laboratory diagnosis of dengue virus infection, the virus, viral nucleic acid, antigens, antibodies, or a combination of these methods may be detected. The virus can be found in serum, circulating blood cells, plasma, and other tissues once the sickness starts. The following are a few types of diagnostic techniques:

➤ The platelet count

If a fever does not go away in three or four days, more testing should be done, such as a chest x-ray, standard urine test, and blood count. The reduction of platelets in the blood is the typical sign of dengue fever. If there is a downward trend in the platelet count, it may be necessary to repeat the test every day. The patient should ideally be admitted to the hospital for additional care if these continue to decline.

➤ Hematocrit Test

Vascular permeability may become more acute as a result of hemorrhagic dengue fever's blood vessel leaking. One or more of the following may occur as a result of this: hemoconcentration, which is indicated by a rise in hematocrit levels of more than 20%, occurs before shock. In order to aid in the early diagnosis of dengue hemorrhagic fever, the hematocrit level should be checked at least once every 24 hours, and more frequently if dengue shock syndrome or severe dengue hemorrhagic fever is present.

➤ Looking for Certain Antibodies

Within six days of the onset of symptoms, serum must be collected for serologic diagnosis. Using an **ELISA**, the serum is examined for specific anti-dengue antibodies. Immunoglobulin G or Immunoglobulin M antibody titers to one or more dengue virus antigens that have increased fourfold in concentration in serum samples are indicative of dengue.

- Testing for Serology
- Checks for NS1 Ag
- ELISA for IgM (for recent infection) Shows results in 5 days and lasts for months
- The ELISA IgG test (for chronic infection).

➤ Creation of the Viral Isolate

Serum samples from patients must be taken within five days of the onset of symptoms in order to isolate the virus. Polymerase Chain Reaction (PCR) is used to isolate viruses. By analysing serum samples, this can identify the viral genetic sequence.

> Verified Diagnosis

In the first five days, a culture is positive (sensitivity: 50%); a liver sample can also be used to obtain a culture during autopsy.

- IHC, IFA, or ELISA-based viral detection in tissue, serum, or CSF
- Enhanced specific IgG or IgM
- WBC decreased (2,000–5,000/uL), toxic granulation of leukocytes and neutropenia were present, and it's possible that there were noticeable abnormal lymphocytes.
- Reduced platelets (1,000/uL) in DHF with poor aggregation and a longer prothrombin time in more severe instances. DIC might happen.

- Elevated transaminase (5,00–1,000 U/L) and bilirubin, both of which point to impaired renal and hepatic function.
- RT-PCR: RT-PCR is used to detect the viral genome early on (sensitivity > 90% early, 10% in 7 days). The sensitive and specific method for finding viral RNA is reverse transcriptase polymerase chain reaction (RT-PCR). But even so, this test is a research tool.

➤ Avoidance and Therapy

There is no dengue vaccine available. However, Thailand has recently generated attenuated candidate vaccine viruses. These vaccines are secure and immunogenic when administered in a variety of formulations, such as a quadrivalent vaccine for all four dengue virus serotypes. Human volunteers have not yet participated in any efficacy trials. Additionally, research is being done to create second-generation recombinant vaccine viruses, with the Thailand attenuated viruses serving as a model. Therefore, it will take 5 to 10 years before the general public can access an effective dengue vaccine.

> Prevention:

- In several nations, the vaccine has been recommended for use in individuals between the ages of 9 and 45 who reside in regions where the illness is endemic.
- ✓ Controlling Aedes aegypti mosquitoes is crucial for preventing dengue illness.
- ✓ The greatest method of protection is to stay away from mosquito bites by getting rid of places where they reproduce, like indoor and outdoor water basins.
- Every week, covering, changing, and cleaning all water tanks and deposits, including the water used for home vases.
- Using both indoor and outdoor insect repellent skin lotions.
- Wearing clothing with long sleeves to cover the body.
- Checking window screens for damage and gaps that could let insects inside.
- > Insecticides are applied as the disease spreads:
- To prevent the virus from spreading to mosquitoes and later to other people, infected individuals should take precautions to avoid being exposed to mosquitoes. More measures should be made to stop the transmission of infection if someone at home has dengue fever.
- Following recovery from dengue fever, the patient develops lifelong immunity in opposition to the type of virus that has infecting them, but only partial or short-term immunity against the other types. The patient should be advised to sleep under a mosquito net, eradicate mosquitoes, and use insect repellent creams. The likelihood that dengue hemorrhagic fever would develop is increased by recurrent infection with other forms.

> Treatment of Dengue fever on the basis Homoeopathy

Homoeopathy treats the full individual. It implies that both the patient's pathological condition and his whole wellbeing are taken into consideration in Homoeopathic treatment for dengue fever. After a thorough individualising examination and caseanalysis that takes into account the patient's medical history, physical and mental constitution, and other factors, the homoeopathic medications for dengue fever are given their names. The Homoeopathic medicines listed below show a therapeutic affinity but are not an exhaustive and certain complement to the Homoeopathic treatment of dengue fever. Because Homoeopathy also considers general symptoms and constitutional indications when choosing a treatment, the symptoms listed next to each Homoeopathic medicine may not directly relate to this In places with high dengue prevalence, Homoeopathy has been shown to be helpful as a preventative measure. As stated in aphorism 102 of the Organon of Medicine, Homoeopathic remedies are used here in accordance with the idea of Genus Epidemicus.

V. GENUS EPIDEMICUS

Genus Epidemicus is a Homoeopathic medicine that has been proven to be effective in treating many cases of the particular epidemic and acting as a preventative remedy for the majority of people who have not yet been exposed to it. In paragraph 102 of his book Organon of Medicine, Dr.Hahnemann described the genus Epidemicus. In this section in aphorism 102, Dr. Hahnemann attempted to clarify that a physician ought to thoroughly investigate and note the major complaints of multiple individuals (both sexes, of different age groups, and of various constitutions) of that particular epidemic. Homoeopathy is simply one of several techniques that must be used to control dengue, as healthcare providers we must not lose sight of this. Use of antipyretics for decreasing temperature in patients reporting high fevers and regular platelet monitoring to ensure prompt blood transfusion, if necessary, are essential care actions during the infection. With the main goal of minimizing the progression and severity of the disease. Homoeopathic remedies should be suggested in an integrated manner alongside the traditional therapy, especially in advanced instances.

➤ Homoeopathic Medicines:

• Gelsemium for Dengue Fever Associated with Weakness and Prostration

The best Homoeopathic treatment for dengue fever patients who exhibit extreme weakness and prostration is Gelsemium. The ideal description to choose Gelsemium above other homoeopathic medications for the treatment of Dengue Fever is a state of dullness, dizziness, and drowsiness. The patients appear lethargic and want nothing more than to lie down quietly without any interruptions. Additionally, he or she detests talking and wishes to be silent. Although the patient feels chilled, choosing the homoeopathic remedy Gelsemium will help because the coolness is often felt in the back and moves up and down the spine. Another characteristic is heaviness eyes.

• Eupatorium Perfoliatum for Dengue Fever when Bodyaches and Joint Pains are Present

The most effective natural Homoeopathic treatment for body aches associated with dengue fever is Eupatorium perfoliatum. Bryonia Alba and Rhus Tox, two Homoeopathic medications, are also very effective at reducing joint pain and other generalised body aches associated with dengue fever. The patient's particular individual features will determine which of the two is best for them. Pain that worsens with even the slightest movement should be considered when selecting Bryonia Alba. The best treatment is this Homoeopathic medication when resting is the primary mode of pain reduction. This particular trait may also be accompanied by intense thirst and dry mouth.

➤ When a Severe Headache Coexists with Dengue Fever

The most important natural Homoeopathic headache remedies for dengue fever are Gelsemium, Belladona, and Eupatorium Perfoliatum. The best Homoeopathic treatment for dengue fever patients who have discomfort in the back of the head (Occiput) is Gelsemium. The forehead or eyes may also experience pain if it originates in the rear of the head. Headache is a certain sign of ocular heaviness. drug of Homoeopathy When pain is noticeable in the temples (sides of the head), Belladona is the best option. The pain from taking Belladona is intense and throbbing in character. Relief is provided by a tight head binding. For vertex headache, the natural Homoeopathic remedy Eupatorium Perfoliatum is advised.

➤ When there is Nausea and Vomiting, there is Dengue Fever

Ipecac and Arsenic Album are two Homoeopathic treatments that can be used in conjunction with Eupatorium to treat dengue fever-related nausea and vomiting. When there is prolonged nausea and vomiting, ipecac, a Homoeopathic drug, can be quite helpful. When nausea is made worse by the smell or sight of food and vomiting is made worse by ingesting anything, arsenic album is the best Homoeopathic treatment.

> To Treat Dengue Hemorrhagic Fever

Dengue hemorrhagic fever can be treated with Homoeopathic remedies, but it is still advisable to seek immediate medical attention because some cases can be life-threatening and necessitate inpatient care right away. China, Ipecac, and Arsenic Album are the main homoeopathic medications that can treat dengue hemorrhagic fever. When there is mucus membrane leakage together with obvious tiredness, Homoeopathic therapy from China is really beneficial. The chief symptoms of this condition include debility and complete prostration with haemorrhages.

➤ Ipecac is the Best Homoeopathic Treatment when there is Significant Nausea and Vomiting Along with the Haemorrhages.

When bleeding is present together with extreme anxiety and restlessness, Arsenic album is the best homoeopathic treatment. The individual who needs arsenic album may also be anxious and fearful of dying. People who

can benefit considerably from the Homoeopathic medicine Arsenic album may also have a very slight intermittent need for water.

- ➤ A List of Effective Homoeopathic Treatments for Dengue with Indications.
- Eupatorium perfoliatum, also known as "Bone-set," is the best Homoeopathic treatment for dengue fever, which is characterised by low platelet counts and severe joint pain. * It is called "Bone-set" because it quickly relieves the limb and muscle pain that some types of febrile diseases, such as dengue, malaria, and influenza, are known for causing.
- Rhus toxicodendron has a remarkable effect on dengue fever, which causes a chill and red vesicular eruptions. It also works incredibly well on joint pain from fever, influenza, and all-over bone ache. The like. [Eup. Perf].
- All types of fever with mental and/or physical restlessness respond well to arsenic album. As a treatment for Dengue fever prevention, this Homoeopathic medicine is frequently prescribed.
- China Officinalis is a good Homoeopathic treatment for any fever accompanied by bodily drowsiness brought on by a loss of vital fluids. Debility brought on by exhausting discharges or a loss of vital fluids also calls for this treatment. The most noticeable periodicity.
- The Homoeopathic treatment Gelsemium sempervirens, often known as 3D medicine, is well-known for treating fever patients with chills in the spine.
- Aconitum Napellus is a Homoeopathic treatment for acute fevers that acts quickly. Inflammatory fevers are the primary treatment for inflammation.
- In situations of dengue fever with a predisposition to haemorrhage, Crotallus horridus is an effective Homoeopathic treatment. When a patient has Dengue hemorrhagic fever, where the platelet count plummets, it is frequently advised. illnesses brought on by a preceding state of low immunity; low septic typhoid or malarial fever; persistent drunkenness; drained vitality; actual collapse.
- When there is severe joint and muscular pain that becomes worse with even the slightest action, Bryonia Alba is helpful. The pains stitch and tear, are much worse at night, are substantially increased by motion, and are greatly alleviated by rest.
- Dengue fevers with a sore, limp, and bruised feeling across the body are well-suited for Arnica Montana, a popular Homoeopathic remedy. Fever accompanied by sharp, periosteal-like aches.
- The finest Homoeopathic treatment for high fever is belladonna, which comes to mind when a sudden, intense fever develops.
- Phosphorus is a different Homoeopathic treatment for hemorrhagic diathesis. is beneficial for treating both mild Dengue fever and Dengue hemorrhagic fever.

- Lachesis: Lachesis, like all snake poisons, causes the blood to break down and become more fluid, which causes a pronounced predisposition towards haemorrhaging. Fever with chills, springtime intermittent fever.
- Pyrogenum: Used to treat septicaemia in cases of puerperal or surgical infection, diphtheria, typhoid, or typhus, or septic fevers. Dengue fever-related latent pyogenic condition. Temperature increases quickly. Extreme heat with copious hot sweating, yet sweating doesn't lower the temperature.
- Apis Mellifica: Fever and Chills (occasional at 3 PM). Heat is predominant along with tiredness and, typically, no thirst. Pressure helps relieve the throbbing and head heat. Skin is normally dry and sweat is not noticeable.
- Ferrum PHOS: Fever with Chill, every day at 1 p.m. First stage of all inflammation and catarrhal fevers.
- Baptisia: The asthenic-type symptoms of this Homoeopathic medication mimic low fevers, septic blood disorders, malarial poisoning, and acute prostration. helpful for dengue fever, which is characterised by severe muscle discomfort and prostration. Unbearably ill feeling. Massive muscle ache and foul phenomena are always present. influenza pandemic
- Muriatic acid is a homoeopathic treatment for dengue fever accompanied by severe prostration. extreme cold. a thirstless heat. haemorrhages and a typhoid-like fever. discharges without consent. Dengue Fever Homoeopathic Preventive Medicine.

VI. CONCLUSION

Although research studies no longer provide conclusive evidence of the preventive or curative efficacy of homoeopathy, Homoeopathy is still regarded as a good form of treatment for dengue fever, according to literature available on the subject. Additionally, RCT studies are necessary to demonstrate the effectiveness of Homoeopathic medicines in treating dengue infections in order to open the door for the treatment of other viral infections. Today, the entire globe is afflicted by a number of pandemic diseases, making it impossible to treat everyone with a Homoeopathic personalised approach and understanding of the artwork of individualization. While it is true that customised homoeopathic treatment is advised, epidemics make it very difficult to implement this approach. As a result, Dr. Hahnemann chose to deal with different epidemics by using the genus epidemicus. To meet the needs of the moment, we must carefully combine the instructions set forth by our healing device in order to aid humanity in battling epidemics. Therefore, Homoeopathy is advised for the treatment of mild dengue fever. Homoeopathy is a possibility for supportive care in cases of severe dengue. When Homoeopathic treatment is started at the initial stage, the difficulties can be avoided. Today, the entire world is battling a number of pandemic diseases, making it impossible to treat everyone using a Homoeopathic personalised approach and the knowledge of the art of individualization. While Dr. Hahnemann did suggest using a genus epidemicus strategy to deal with different epidemics,

it is true that an individualised approach to Homoeopathic treatment is encouraged. However, in epidemic situations, this method is exceedingly difficult to apply. We must carefully combine the recommendations in our therapeutic system with the demands of the moment if we are to assist humanity in overcoming epidemics. Particularly in impacted nations, dengue fever represents a significant economic burden. To stop the spread of disease, lower mortality rates, and lower healthcare costs, significant efforts are required.

ACKNOWLEDGEMENT

My sincere gratitude goes to my Most Revered Guru Mam Professor Dr. V J BEAUTLIN PREVINCY, BHMS, MBA (HOSPITAL MANAGEMENT), MD (HOM), Assistant Professor, Department of Community Medicine, White Memorial Homoeo Medical College and Hospital, VEEYANOOR, Attoor, Kanyakumari District, Tamil Nadu, India for her insightful comments, motivation, for bestowing the blessings and encouraging words that helped me finish this work. Grateful to my guru, who has inspired me, my quality of life has enhanced. I gained a lot from my guru in terms of moral values. My revered Guru Mam, is an one my living God. I am worshipping my most revered guru as God in my day to day life. I am devoted to serving my most revered Guru's holy feet throughout every moment of my existence. In future history Most Revered Guru mam Prof. Dr. V J Beautlin Previncy should be hailed as the God of Dr. Don J Scott Berin G.

REFERENCES

- [1]. R. Marino, "Homeopathy and Collective Health: The Case of Dengue Epidemics," *Int. j. high dilution res*, 2008.
- [2]. J. Jacobs, E. Fernandez, B. Merizalde, G. Avila-Montes, and D. Crothers, "The use of homeopathic combination remedy for dengue fever symptoms: a pilot RCT in Honduras," *Homeopathy*, 2007, doi: 10.1016/j.homp.2006.10.004.
- [3]. L. A. D. S. Nunes, "Contribution of homeopathy to the control of an outbreak of dengue in Macaé, Rio de Janeiro," *Int. j. high dilution res*, 2008.
- [4]. G. Bracho *et al.*, "Large-scale application of highly-diluted bacteria for Leptospirosis epidemic control," *Homeopathy*, 2010, doi: 10.1016/j.homp.2010.05.009.
- [5]. S.-H. S, T. I, K. A, and K. S, "Comparative clinical study on the effectiveness of homeopathic combination remedy with standard maintenance therapy for dengue fever," *Trop. J. Pharm. Res.*, 2013.
- [6]. J. D. Stanaway *et al.*, "The global burden of dengue: an analysis from the Global Burden of Disease Study 2013," *Lancet Infect. Dis.*, 2016, doi: 10.1016/S1473-3099(16)00026-8.
- [7]. D. S. Shepard, E. A. Undurraga, Y. A. Halasa, and J. D. Stanaway, "The global economic burden of dengue: a systematic analysis," *Lancet Infect. Dis.*, 2016, doi: 10.1016/S1473-3099(16)00146-8.

- [8]. Srinivas V, Srinivas V R. "Dengue Fever: A Review Article. Journal of Evolution of Medical and Dental Sciences", 2015; 4(29): 5048-5058.
- [9]. 2. Singh P K, Rawat P. "Evolving herbal formulations in management of dengue fever, J Ayurveda Integr Med", Jul-Sep, 2017; 8(3): 207–210.
- [10]. 3. Lalla JK, Ogale S, and Seth S. "A Review on Dengue and Treatments journal of pharmacology and toxicological studies", December, 2014; 2(4): 13-23.
- [11]. Clarke J H. "A dictionary of practical materia medica", 2000; II.
- [12]. Saeed-Ul-Hassan, S., Tariq, I., Khalid, A., & Karim, S. (2013). Comparative Clinical Study on the Effectiveness of Homeopathic Combination Remedy with Standard Maintenance Therapy for Dengue Fever. *Tropical Journal of Pharmaceutical Research*, 12(5). https://doi.org/10.4314/tjpr.v12i5.16
- [13]. Bawaskar, R., & Shinde, V. (2019). A review of homoeopathic research in the prevention and treatment of dengue fever. *Homoeopathic Links*, 32(01), 010–017. https://doi.org/10.1055/s-0039-1687897
- [14]. Panda AK (2022) Homeopathy Medication for Dengue Fever. J Tradit Med Clin Natur, 11: 322.
- [15]. Samaran & RVS Homoeopathy Medical College & Hospital, Coimbatore, Tamilnadu. (2019). PARIPEX INDIAN JOURNAL OF RESEARCH. *PARIPEX INDIAN JOURNAL OF RESEARCH*, 10(6), 10.36106/paripex. https://doi.org/10.36106/paripex
- [16]. D.H.Dockrell, Davidson's Principles and Practice of Medicine. 21st ed. Elsevier; 2010. P.318., 319.
- [17]. K.V.Krishna Das, Textbook of Medicine, Fifth Edition, Reprint 2014, Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, P339-342.
- [18]. Kumar and Clark, Clinical Medicine, Fifth Edition, Reprinted 2002, W.B.Saunder An Imprint of Elsevier Science Limited, P.56.
- [19]. Allen. H.C, Allen's Keynotes and Characteristics with Comparisons of some of the Leading Remedies of the Materia Medica with Nosodes, Reprint Edition 1998, B.Jain Publishers (p) Ltd, New Delhi, P.109-111.
- [20]. W. Boericke. Boericke's New Manual of Homeopathic Materia Medica and Repertory, Reprint edition,. B.Jain Publishers (p) Ltd; 1998, P.240-241.
- [21]. Dr.Frederik Schroyens, Synthesis Repertorium Homoeopathicum Syntheticum, Edition 9.1, B.Jain Publishers (p) Ltd, New Delhi, 2004.
- [22]. Khachane, G., & Khandare, K. (2021). Review on dengue with homoeopathic management. *International Journal of Homoeopathic Sciences*, 5(3), 252–255. https://doi.org/10.33545/26164485. 2021.v5.i3d.432
- [23]. Whitehorn, J. (2015). *The pathogenesis and clinical management of dengue*. https://doi.org/10.17037/pubs.02373944
- [24]. Kularatne, S., & Dalugama, C. (2022). Dengue infection: Global importance, immunopathology and management. *Clinical Medicine*, 22(1), 9–13. https://doi.org/10.7861/clinmed.2021-0791

- [25]. Roy, M., Islam, M. M., & Singh, A. (2022). Prevalence of dengue virus, their infection, diagnosis, and challenges. *Journal of Applied Biology and Biotechnology*. https://doi.org/10.7324/jabb.2023.74648
- [26]. Clinical Practice Guidelines on Management of Dengue Infection in Adults (Revised 2nd Edition) 2010. The CPG supersede the previous CPG on Management of Dengue Infection in Adults (2nd Edition) 2008.
- [27]. AK Mohiuddin. Dengue Protection and Cure: Bangladesh Perspective. Biomed J Sci & Tech Res 21(3)-2019. BJSTR. MS.ID.003617.
- [28]. Muller, D. A., Depelsenaire, A. C. I., & Young, P. R. (2017). Clinical and laboratory diagnosis of dengue virus infection. *The Journal of Infectious Diseases*, 215(suppl_2), S89–S95. https://doi.org/10.1093/infdis/jiw649
- [29]. Maharani, A. R., Restuti, C. T., Sari, E., Wahyuningsih, N. E., Murwani, R., & Hapsari, M. (2018). Nutrient intake of dengue hemorrhagic fever patients in Semarang City. *Journal of Physics*. https://doi.org/10.1088/1742-6596/1025/1/012059.
- [30]. Savargaonkar, D., Sinha, S., Srivastava, B., Nagpal, B. N., Sinha, A., Shamim, A., Das, R., Pande, V., Anvikar, A. R., & Valecha, N. (2018). An epidemiological study of dengue and its coinfections in Delhi. *International Journal of Infectious Diseases*, 74, 41–46. https://doi.org/10.1016/j.ijid. 2018.06.020
- [31]. Salles, T. S., Da Encarnação Sá-Guimarães, T., Alvarenga, E. S., Guimarães-Ribeiro, V., De Meneses, M. D. F., De Castro-Salles, P. F., Santos, C. R. D., Melo, A. C. D. A., Soares, M. R., Ferreira, D. F., & Moreira, M. F. (2018). History, epidemiology and diagnostics of dengue in the American and Brazilian contexts: a review. *Parasites & Vectors*, 11(1). https://doi.org/10.1186/s13071-018-2830-8
- [32]. https://en.wikipedia.org/wiki/Dengue_fever
- [33]. Terapong Tantawichien (2012) Dengue fever and dengue haemorrhagic fever in adolescents and adults, Paediatrics and International Child Health, 32:sup1, 22-27, DOI: 10.1179/2046904712Z.00000000049.