



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## EVIDENCE BASED HOMOEOPATHY: CASE REPORT OF DENGUE FEVER

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**Abstract** – Dengue is an acute viral disease caused by FlaviVirus(RNA virus) and the vector responsible is *Aedes Aegypti*. Clinical features may range from asymptomatic fever to complications such as hemorrhagic fever and shock. Early and accurate diagnosis is vital so that we can prevent its morbidity as well as mortality rate. This article gives details about its Aetiology, Clinical Features, Investigations, Complications, Management, Preventive measures with a case managed with Homoeopathic Medicines. The Homoeopathy system has good scope in controlling both morbidity and mortality rate in Dengue Fever.

**Case Summary** – This is the case of a 32 years old female with a history of weakness, headache and decreasing platelet count, presented to me is documented. Patient was treated with Homeopathic Medicine based on acute totality. There was significant improvement with Homeopathic treatment.

**Keywords** – Homoeopathy, Dengue Fever, Dengue Shock Syndrome, Thrombocytopenia, Break Bone Fever.

### INTRODUCTION: Dengue Fever

#### Aetiology:

Dengue Flavivirus is a common cause of fever and acute systemic illness in the tropics. It is endemic in South East Asia and India, and is also seen in Africa, the Caribbean and the Americas. The principle vector is the mosquito *Aedes Aegypti*, which breeds in standing water, collection of water in containers, water based air coolers and tyre dumps are a good environment for the vector in large cities. *Aedes Albopictus* is a vector in some southeast Asian countries.<sup>(1)</sup>

Dengue fever virus (DENV) is an RNA virus of the family *Flaviviridae*; genus *Flavivirus*. There are five strains of the virus, called serotypes, of which the first four are referred to as DENV-1, DENV-2, DENV-3 and DENV-4. The fifth type was announced in 2013. The distinctions between the serotypes are based on their antigenicity.<sup>(4)</sup>

## Clinical Features:

The incubation period is 5-6 days, following the mosquito bite. Asymptomatic or mild infections are common<sup>(3)</sup>

## Mild dengue Fever:

Symptoms can appear up to 7 days after being bitten by the mosquito that carries the virus. They include:

- Aching Muscles And Joints (Breakbone Fever)
- Body Rash That Can Disappear And Then Reappear
- High Fever
- Intense headache
- Pain Behind The Eyes
- Vomiting And Feeling Nauseous

Symptoms usually disappear after a week, and mild dengue rarely involves serious or fatal complications.

## Dengue Hemorrhagic Fever:

A person with Dengue hemorrhagic fever may experience:

- Bleeding From The Mouth, Gums, Or Nose
- Clammy Skin
- Damage To Lymph And Blood Vessels
- Internal Bleeding, Which Can Lead To Black Vomit And Feces, Or Stools
- A Lower Number Of Platelets In The Blood
- Sensitive Stomach
- Small Blood Spots Under The Skin
- Weak pulse

Without prompt treatment, DHF can be fatal.

## Dengue shock Syndrome:

DSS is a severe form of dengue. It can be fatal.

Apart from symptoms of mild dengue fever, the person may experience:

- Intense Stomach Pain
- Disorientation
- Sudden hypotension, Or A Fast Drop In blood Pressure
- Heavy Bleeding
- Regular Vomiting
- Blood Vessels Leaking Fluid

Without treatment, this can result in death.<sup>(7)</sup>

## Investigations:

### Virological methods:

The virus may be isolated from the blood during the first few days of infection. Various reverse transcriptase–polymerase chain reaction (RT–PCR) methods are available. The virus may also be detected by testing for a virus-produced protein, called NS1. There are commercially-produced rapid diagnostic tests available for this.

### Serological methods:

Serological methods, such as enzyme-linked immunosorbent assays (ELISA), may confirm the presence of a recent or past infection, with the detection of IgM and IgG anti-dengue antibodies.<sup>(6)</sup>

The earliest change detectable on laboratory investigations is a low white blood cell count, which may then be followed by low platelets and metabolic acidosis.

A moderately elevated level of aminotransferase (AST and ALT) from the liver is commonly associated with low platelets and white blood cells.

In severe disease, plasma leakage results in hemoconcentration (as indicated by a rising hematocrit) and hypoalbuminemia. Pleural effusions or ascites can be detected by physical examination when large, but the demonstration of fluid on ultrasound may assist in the early identification of dengue shock syndrome.<sup>(4)</sup>

### Diagnosis:

The diagnosis of dengue is typically made clinically, on the basis of reported symptoms and physical examination. A probable diagnosis is based on the findings of fever plus two of the following: nausea and vomiting, rash, generalized pains, low white blood cell count, positive tourniquet test, or any warning sign (worsening abdominal pain, ongoing vomiting, liver enlargement, mucosal bleeding, low platelet, lethargy and serosal effusions) in someone who lives in an endemic area.<sup>(4)</sup>

### Complications:

Minor Bleeding from Mucosal Sites, Hepatitis, Cerebral Haemorrhage or Oedema, Rhabdomyolysis.<sup>(1)</sup>

### Management:

Treatment is Symptomatic. Aspirin should be avoided due to bleeding risk. Volume replacement and blood transfusions may be indicated in patients with shock. With Intensive care support, mortality rates are 1% or less. Corticosteroids have not been shown to help. No existing antivirals are effective.<sup>(1)</sup>

Vast Majority of patients can be managed as outpatients with Paracetamol for fever, antiemetics, oral fluids, reassurance and rest.

Complicated DF, DHF and DSS – treated in ICU with proper monitoring of vital parameters, attention to nutrition and fluid and electrolyte imbalance to be given. Hypotension, signs of increased fragility and toxemia are indications of IV Fluids.

Indication for Blood components, Blood Transfusion - Platelet count  $<25,000/\text{cmm}$  with bleeding is an indication for platelet rich plasma or platelets concentrates. In massive bleeding give blood transfusion.<sup>(2)</sup>

### Prevention:

There is no vaccine to prevent dengue fever. The best method of protection is to avoid mosquito bites and to reduce the mosquito population. When in a high-risk area, you should:

- avoid heavily populated residential areas
- use mosquito repellent indoors and outdoors
- wear long-sleeved shirts and pants tucked into socks
- use air conditioning instead of opening windows
- ensure that window and door screens are secure, and any holes are repaired
- use mosquito nets if sleeping areas are not screened

Reducing the mosquito population involves getting rid of mosquito breeding areas. These areas include any place that still water can collect, such as:

- birdbaths
- pet dishes
- empty planters
- flower pots
- cans
- any empty vessel

These areas should be checked, emptied, or changed regularly.<sup>(5)</sup>

**Case report** – 32-year-old female came with a history of weakness, headache and decreasing platelet count since three days. She presented with weakness all over body with occipital headache and decreasing platelet count. The headache is getting aggravated by lying down and better by pressure. She had a history of fever, joint pains, headache and eye pain since one week and took allopathic medicines for the same from a General Physician.

**Past Medical history:** Nothing Significant

**Family history:** Father – H/O Diabetes Mellitus and Mother – H/O Rheumatoid Arthritis

**Personal history:**

Appetite – Good

Thirst - Thirsty

Bowel / Bladder Habits – Regular and Satisfied

Sleep – Good

**Physical examination:**

Built and nourishment: moderately built and moderately nourished.

Patient is conscious, well oriented with time, place and person.

No signs of Pallor, Cyanosis, Clubbing, Icterus, Oedema and Lymphadenopathy.

Temperature – Afebrile

Respiratory Rate – 16 breaths per minute.

Blood pressure: 120/80mm Hg, Right Arm Supine Position.

Pulse rate: 76 beats/min Regular Rhythm, Moderate volume and condition of vessel wall not palpable

**Systemic Examination:**

Respiratory system – vesicular breath sound heard all over lung field, no added sounds.

CVS – S1S2 heard normally all four cardiac areas and no Murmurs.

**Repertorial Totality:**

Synthesis Repertory is being used to repertories using following rubrics

1. Fever – Continued Fever – Hemorrhagic
2. Generals – laboratory findings – platelet decreased
3. Head – pain – occiput
4. Head – pain – pressure - amelioration

**Repertorisation Result:**

- |                   |                   |
|-------------------|-------------------|
| 1. Lachesis – 7/3 | 3. China – 6/3    |
| 2. Arnica – 6/3   | 4. Crot Hor – 6/3 |

In Synthesis Repertory,

Since under the rubric fever - continued fever – hemorrhagic, Crot Hor covers three marks, Crotalus Horridus is selected. On referring to Boericke's Materia Medica further Crot Horridus covers the totality as well. Hence it was administered.

First prescription on – 25th december 2018 , Crotalus Horridus 1 M two doses were given to take a dose immediately and to repeat the second dose at night. She was advised to repeat platelet count to see for the improvement

**Follow up:**

On 26<sup>th</sup> December 2018 – Headache Better and weakness better hence placebo being administered to take morning and night.

On 27<sup>th</sup> December 2018 – Patient was better and advised to repeat blood test again which showed satisfactory improvement. Platelet count improved from 1,04,000 to 1,64,000.

**REPORT**

PTN PACE ADARSH APTS, 3RD BLOCK,  
4TH FLOOR, DOOR-3, SELAIYUR, CH-73  
Tel No : 9840889688  
PID NO: P64180225703  
Age: 31.7 Year(s) Sex: Female

Reference: Dr.SELF  
Sample Collected At:  
SELAİYUR  
#236,ER PLAZA 2ND  
FLOOR,VELACHERY MAIN  
ROAD,CHENNAI 73  
600073

VID: 64187010650  
Registered On:  
23/12/2018 10:32 AM  
Collected On:  
23/12/2018 10:35AM  
Reported On:  
24/12/2018 02:10 PM

Investigation	Observed Value	Unit	Biological Reference Interval
Investigation	Observed Value	Unit	Biological Reference Interval
Material Parasite (WB/QBC)	Negative		Negative

QBC technique is the most sensitive test for diagnosis of haemoparasites, due to the technique of utilising high volume of blood, concentration of parasites and fluorescent staining of parasites.

Grading	
Negative	No parasites seen
+	< 1 Parasite/QBC field
++	1 - 10 Parasite/QBC field
+++	11 - 100 Parasite/QBC field
++++	> 100 Parasite/QBC field

Dengue (NS1) antigen  
(Serum, ELISA)

Positive (>11)

Panbio Units

Negative: < 9.0  
Equivalent: 9.0-11  
Positive: > 11  
Kit interpretation range.

Associated Test:

- Dengue Real Time PCR test is also available for early detection.
- "Fever Panel by Multiplex PCR" for early diagnosis of Dengue virus, Chikungunya virus, Salmonella spp., West Nile virus, Plasmodium spp., Rickettsia spp. and Leptospira spp.

Reports to follow - Kindly await following pending reports:

Investigation	Status
CBC, Complete Blood Count	Pending

-- End of Report --

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LISTER  
METROPOLIS  
The Pathology Specialist

INNER HEALTH REVEALED

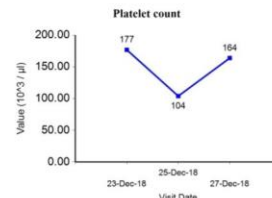
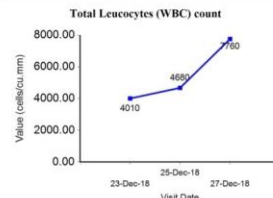
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#236,ER PLAZA 2ND  
FLOOR,VELACHERY MAIN  
ROAD,CHENNAI 73  
600073

VID: 64187010793  
Registered On:  
27/12/2018 10:00 AM  
Collected On:  
27/12/2018 10:01AM  
Reported On:  
27/12/2018 12:27 PM

## Result Trend (For selected tests used for followup)



**REPORT**

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FLOOR, DOOR-3, SELAIYUR, CH-73  
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27/12/2018 10:00 AM  
Collected On:  
27/12/2018 10:01AM  
Reported On:  
27/12/2018 12:27 PM

Investigation	Observed Value	Unit	Biological Reference Interval
<b>Erythrocytes</b>			
Erythrocyte (RBC) Count	4.20	mill/cu.mm	4.2-5.4
Haemoglobin (Hb)	11.1	gm/dL	12.5-16
PCV (Packed Cell Volume)	33.9	%	37-47
MCV (Mean Corpuscular Volume)	80.7	fL	78-100
MCH (Mean Corpuscular Hb)	26.4	pg	27-31
MCHC (Mean Corpuscular Hb Concn.)	32.7	g/dL	32-36
RDW (Red Cell Distribution Width)	13.3	%	11.5-14.0
<b>Leucocytes</b>			
Total Leucocytes (WBC) count	7760	cells/cu.mm	4000-10500
Absolute Neutrophils Count	3958	/c.mm	2000-7000
Absolute Lymphocyte Count	3259	/c.mm	1000-3000
Absolute Monocyte Count	233	/c.mm	200-1000
Absolute Eosinophil Count	310	/c.mm	20-500
Absolute Basophil Count	0	/c.mm	20-100
Neutrophils	51	%	40-80
Lymphocytes	42	%	20-40
Monocytes	3	%	2.0-10
Eosinophils	4	%	1-6
Basophils	0	%	0-2
<b>Platelets</b>			
Platelet count	164	10 <sup>3</sup> / µl	150-450
MPV (Mean Platelet Volume)	10.9	fL	6-9.5
PCT (Platelet Haematocrit)	0.18	%	0.2-0.5
PDW (Platelet Distribution Width)	11.4	%	9-17

EDTA Whole Blood - Tests done on Automated Five Part Cell Counter. (WBC, Platelet count by impedance method/DC detection, RBC by pulse height detection method, HB by Automatic - Photometric Measurement, WBC differential by VCS technology other parameters calculated) All Abnormal Haemograms are reviewed confirmed microscopically. Differential count is based on approximately 10,000 cells.

-- End of Report --

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Kinha  
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Dr. Ramesh Dayanand Kinha

LISTER  
METROPOLIS  
The Pathology Specialist

INNER HEALTH REVEALED

## Result –

On 27<sup>th</sup> December 2018, on repeating blood test platelet count improved and she felt generally better.



**Discussion** – This case report indicates the importance of totality based homoeopathic medicine selection in acute cases. The task of treating Dengue fever by conventional oral medicine was unsatisfactory, and the patient was restored to cure with homoeopathic treatment. The remedy *Crotalus Horridus 1M* was selected on the basis of acute Totality and after administering it the patient improved symptomatically as well as generally. Her blood parameters came to normal level and complications of Dengue fever like Dengue Shock Syndrome and Thrombocytopenic haemorrhage were prevented. The case shows marked improvement after homoeopathic treatment.

**Conclusion** – Homeopathy treats patients based on symptom similarity, this case shows how we can approach to cure by selecting medicine on the basis of totality of symptoms and marked improvement in patient is seen with documentary evidence. This case shows the efficacy of homoeopathy in treating Dengue Fever.

**Declaration of patient consent** –The patient has given her consent for reports and other clinical information to be reported in the journal.

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