CENTRAL COUNCIL FOR RESEARCH IN HOMOEOPATHY

Guidelines for Homoeopathic Practitioners for Management of Dengue Fever

Dengue fever, also known as breakbone fever, is an infectious tropical disease caused by the dengue virus. Symptoms include fever, headache, muscle and joint pains, and a characteristic skin rash that is similar to measles. In a small proportion of cases the disease develops into the life-threatening dengue hemorrhagic fever, resulting in bleeding, low levels of blood platelets and plasma leakage, or into dengue shock syndrome, where dangerously low blood pressure occurs.

Homoeopathy has a long record of success in the treatment of epidemic conditions and recent experiences in Brazil and India strongly point to the usefulness of homoeopathy in treatment and prevention for dengue. The treatment is holistic and individualized and selection of homoeopathic medicines depends upon the individual response to infection, severity of disease and clinical presentation of the case.

With the rising incidence of dengue and dengue hemorrhagic fever, some homoeopathic practitioners and associations have approached the Council for providing guidelines for treatment and prevention of dengue. The Council has prepared the guidelines from various guidelines issued by different authorities (such as World Health Organization, National Vector Borne Disease Control Program, etc.) and the experiences of senior homoeopathic practitioners. The homoeopathic literature and research studies on epidemic diseases, in general and dengue, in particular have also been referred. The homoeopathic practitioners are advised to refer to these guidelines for management of cases presenting with dengue/high grade fevers (suspected to be dengue).

The objectives of homoeopathic management are to reduce the intensity of fever and bring in symptomatic relief from headache, body ache, weakness, loss of appetite, nausea and other associated symptoms and, also reduce the probability of developing shock, hemorrhage and other complications of dengue. The Homoeopathic intervention is preventive for unaffected persons as well as curative for persons already suffering from dengue. The patients may require hospitalization in cases of dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS). Platelet transfusion is recommended for patients with very low platelet counts (generally below 20,000/cumm). In such cases homoeopathic medicines are to be used as an adjuvant to standard care.
ABOUT THE DENGUE EPIDEMIC
Dengue is the most rapidly spreading mosquito borne viral disease in the world with wide clinical spectrum. In the last 50 years, incidence has increased 30-fold with increasing geographic expansion to new countries and, in the present decade, from urban to rural settings. An estimated 50 million dengue infections occur annually and over 2.5 billion people (about 40% of the world’s population) are now at risk from dengue.

In India, the first epidemic of clinical dengue-like illness was recorded in Madras (now Chennai) in 1780 and the first virologically proved epidemic of dengue fever (DF) occurred in Calcutta (now Kolkata) and Eastern Coast of India in 1963-1964. The first major wide spread epidemic of DHF/DSS occurred in India in 1996 involving areas around Delhi and Lucknow and then it spread to the whole country. India has become an endemic zone for Dengue and Dengue Hemorrhagic Fever (DHF) outbreaks.

SALIENT POINTS:
- Dengue fever is an acute viral infection characterized by high fever, severe headache & intense body ache.
- It can be caused by any one of the four types of dengue viruses; DEN-1, DEN-2, DEN-3 & DEN-4.
- Infection may lead to ‘classical’ dengue fever or dengue hemorrhagic fever without shock or dengue hemorrhagic fever with shock.
- Dengue Hemorrhagic Fever (DHF) is a more severe form of disease, which may cause death.
- Recovery from infection by one serotype provides lifelong immunity against that particular serotype. However, cross-immunity to the other serotypes after recovery is only partial and temporary.
- Likely to be severe and fatal disease in children under 15 years.
- Appropriate Homoeopathic intervention can be used safely in all the stages of diseases. It can prevent as well as provide supportive symptomatic management.

MOSQUITO - DENGUE CARRIER
Aedes mosquitoes are the carrier of the dengue virus. These mosquitoes can be easily distinguished as they are larger in size and have black and white stripes on their body, so they are sometimes called tiger mosquitoes. The mosquito breeds in artificial accumulation of fresh water, such as broken bottles, flower pots, coconut shells, tree holes etc. during & immediately after the rainy season (July-October). It takes about 7 to 8 days to develop the virus in its body and transmit the disease. They usually bite during the day time.
INCUBATION PERIOD
The period from the entry of virus through mosquito bite to appearance of first sign/symptoms is 3-10 days (commonly 5-6 days).

SYMPTOMS:
Classical Dengue Fever
- Abrupt onset of fever with chills
- Fever and other symptoms often follow a ‘saddleback’ sequence that is a brief remission of fever after the third day followed by rise in temperature again after 1-2 days. The fever lasts for 5-7 days after which the recovery is usually complete.
- Body aches and joint pains
- Severe headache mostly in the forehead
- Pain behind the eyes which worsens with eye movement
- Nausea and vomiting
- Weakness
- Flushing rash over chest and upper limbs

Dengue Hemorrhagic Fever
- Fever-acute onset, continues, lasting for 2-7 days
- Severe continuous stomach pains
- Bleeding from nose, mouth & gums and skin rashes
- Liver enlargement and tenderness
- Frequent vomiting with or without blood
- Patient feels thirsty and mouth becomes dry

The severity of DHF is further classified into 4 grades: Grade I where only hemorrhagic manifestation is a positive tourniquet test; Grade II where patient has spontaneous bleeding; Grade III where patient has circulatory failure manifested by rapid and weak pulse, low pulse pressure and hypotension; Grade IV which is the state of profound shock with undetectable blood pressure and pulse.

Dengue Shock Syndrome
- Rapid weak pulse
- Sleepiness and restlessness
- Skin becomes pale, cold or clammy
- Difficulty in breathing
- Altered level of consciousness
Co-existing conditions that may make dengue or its management more complicated include pregnancy, infancy, old age, obesity, diabetes mellitus, renal failure, chronic haemolytic diseases, etc.

**Course of dengue illness**

![Course of dengue illness diagram]

*Source: Dengue Guidelines for Diagnosis, Treatment, Prevention and Control, New edition 2009, World Health Organization (WHO)*

**DIAGNOSIS**

A specific diagnostic test for dengue fever is needed for rapid detection and confirmation of acute condition. Detection of NS 1 Antigen (Card test) is a rapid diagnostic test for dengue virus which can be done on the 1st day of disease itself, before the antibodies appear about 5 or more days later. Blood tests for identification of anti-bodies are also conducted to diagnose dengue. Blood test for leukocyte, platelet & hematocrit are conducted to diagnose dengue fever and for assessment of prognosis of the patients.

In epidemic situation, for every patient reporting with fever, platelet count and hematocrit estimation is recommended, unless some other cause for the fever is identified.
The diagnosis of dengue hemorrhagic fever is made on the basis of the following triad of symptoms and signs:

- Hemorrhagic manifestations
- A platelet count of less than 100,000 per cubic millimeter
- Objective evidence of plasma leakage, shown either by fluctuation of packed-cell volume (greater than 20 percent during the course of the illness) or by clinical signs of plasma leakage, such as pleural effusion, ascites or hypoproteinemia.

**MANAGEMENT**

**Management of dengue without warning signs**

The approach towards patients suffering from dengue/suspected to be suffering from dengue involves detailed history taking and examination, which includes details of onset & nature of fever/illness and assessment for warning signs (hemorrhage from any orifice, hypotension, persistent vomiting, inability to tolerate oral fluids). Conditions, in which, dengue is likely to be more severe must also be identified.

Examination includes assessment of hydration and hemodynamic status (pulse, systolic and diastolic blood pressure), checking for tachypnoea, pleural effusion, examination of rash and bleeding manifestations, assessment of abdominal tenderness, ascites and hepatomegaly. Appropriate investigations are advised for diagnosis and assessment of disease severity. Individual characterizing symptoms specially physical and mental generals should be recorded for the selection of appropriate Homoeopathic regimen.

Follow up of the patients requires strict monitoring for temperature pattern, volume of fluid intake and losses, urine output (volume and frequency) and appearance of warning signs. The investigations for hematocrit and platelet counts are important to assess the progress of each case.

Medicines most frequently indicated in cases of classical dengue fever are *Aconitum napellus*, *Arsenic album*, *Bryonia alba*, *Chamomilla*, *Eupatorium perfoliatum*, *Ferrum phosphoricum*, *Gelsemium*, *Ipecacuanha*, *Natrum muriaticum*, *Nux vomica*, *Pulsatilla* and *Rhus toxicodendron* which are prescribed on the basis of symptom similarity.
Suggestive indications of these medicines are given below:

<table>
<thead>
<tr>
<th>Name of the medicine</th>
<th>Suggestive indications</th>
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| *Aconitum napellus*  | Indicated in first stage of fever.  
Acute, sudden and violent onset of fever.  
Cold stage is marked with icy cold face and cold sweat.  
Skin dry and hot; face red, or pale and red alternately.  
Fever with burning thirst for large quantity of cold water frequently.  
Intense nervous restlessness, tossing about in agony.  
Drenching sweat on parts lain on.  
A state of fear, anxiety; anguish of mind and body.  
Physical and mental restlessness  
Does not want to be touched.  
Sudden and great sinking of strength |
| *Arsenicum album*    | During fever cannot bear the smell or sight of food.  
Marked periodicity of fever.  
High temperature  
Headache, better by cold.  
Burning in eyes, with acrid lachrymation. Great thirst for cold water,  
drinks often but little at a time.  
Sweat at the end of fever, which ameliorates pain.  
Discharges are thin and offensive.  
Fever worse at midday and midnight, from cold drinks and cold foods.  
Debility, exhaustion, and restlessness, with nightly aggravation  
Great exhaustion after the slightest exertion  
Great anguish and restlessness |
| *Bryonia alba*       | Dry cough associated with fever  
Pulse full, hard, tense and quick.  
Stitching, tearing pains, worse by least motion, better by absolute rest and pressure.  
Fever with great thirst for large quantities of water at long intervals.  
Fever associated with constipation; no inclination to stool; stools: large,  
hard and dry, as if burnt.  
Aching in every muscle.  
Patient is irritable; has vertigo from raising the head, pressive headache  
Dry, parched lips, mouth; excessive thirst, bitter taste, sensitive  
epigastrium, and feeling of a stone in the stomach  
Dropsical effusions into synovial and serous membranes |
| *Chamomilla*         | Patient is sensitive, irritable, thirsty, hot, and numb  
Impatient, intolerant of being spoken to or interrupted; extremely  
sensitive to every pain  
Always complaining.  
Spiteful, snappish  
Throbbing headache in one-half of the brain.  
Inclined to bend head backward.  
Hot, clammy sweat on forehead and scalp  
Pain seems unendurable, drives to despair; worse by heat, in evening,  
with heat, thirst and fainting with numbness of affected part |
| *Eupatorium*         | Deep aching, bone-breaking pains; feels bruised and sore, worse in back.  
Painful soreness of eyeballs. |
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<tr>
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<tr>
<td><strong>perfoliatum</strong></td>
<td>Chill preceded by thirst with great soreness and aching of bones. Bitter vomiting at the close of chill. Insatiable thirst for cold drinks, before and during chills and fever; drinking aggravates chill. Sweat ameliorates all symptoms except headache.</td>
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<td><strong>Ferrum phosphoricum</strong></td>
<td>In the early stages of febrile conditions Prostration marked; face more active than Gels. The superficial redness never assumes the dusky hue of Gels. Pulse soft and flowing; no anxious restlessness of Acon. Hemorrhages, bright from any orifice. Headache better cold applications Face flushed; cheeks sore and hot.</td>
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<td><strong>Gelsemium</strong></td>
<td>Chill: wants to be held because of excessive shivering. Fever with dull headache and coryza. Paroxysms of fever generally recur between 3-5 p.m. Great heaviness of the eyelids (droopy); cannot keep them open. Sneezing with stuffed up nose. Headache preceded by blindness, better by profuse urination. Pulse slow, full and soft. Fever with trembling, yellow coating of the tongue; thirstlessness; stupor; dryness of whole body. General prostration. Dizziness, drowsiness, dullness, and trembling. Slow pulse, tired feeling, mental apathy.</td>
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<tr>
<td><strong>Ipecacuanha</strong></td>
<td>Slightest chill with much heat, nausea, vomiting, and dyspnoea Persistent nausea and vomiting Hemorrhages bright-red and profuse Bones of skull feel crushed or bruised Pain through eyeballs Tongue usually clean Mouth, moist; much saliva Vomits food, bile, blood, mucus</td>
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<tr>
<td><strong>Natrum muriaticum</strong></td>
<td>Great debility; weakness and weariness, most weakness felt in the morning in bed. Blinding headache. Eyelids heavy, burning in eyes; give out on reading or writing Fevers-blisters; eruptions around mouth Lips and corners of mouth dry, ulcerated, and cracked. Tongue matted; loss of taste. Craving for salt; aversion to bread Heat with violent thirst, increases with fever Coldness of the body, and continued chilliness very marked Sweats on every exertion</td>
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<tr>
<td><strong>Nux vomica</strong></td>
<td>Very irritable; sensitive to all impressions; cannot bear noises, odors, light, etc. Does not want to be touched Photophobia; much worse in morning. Constipation, with frequent inefficacual urging, incomplete and unsatisfactory Cold stage predominates, excessive rigor, with blueness of finger-nails. Aching in limbs and back, and gastric symptoms.</td>
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<td><strong>Chilly; must be covered in every stage of fever.</strong></td>
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<td><strong>Perspiration sour; only one side of body.</strong></td>
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<td><strong>Dry heat of the body.</strong></td>
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<td><strong>Pulsatilla</strong></td>
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<td><strong>Fever with chilliness even in warm room, yet aversion to heat and better in cool, fresh air</strong></td>
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<td><strong>Chilly with pains, in spots, worse evening.</strong></td>
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<td><strong>As the pain increases, so the chilliness</strong></td>
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<td><strong>Weeps easily</strong></td>
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<td><strong>Timid, irresolute</strong></td>
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<td><strong>Wandering stitches about head; pains extend to face and teeth</strong></td>
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<td><strong>Dry mouth, without thirst; wants it washed frequently</strong></td>
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<td><strong>Intolerable burning heat at night, with distended veins; heat in parts of body, coldness in other.</strong></td>
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<td><strong>One-sided sweat; pains during sweat.</strong></td>
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<td><strong>External heat is intolerable, veins are distended.</strong></td>
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<td><strong>During apyrexia, headache, diarrhoea, loss of appetite, nausea</strong></td>
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| **Rhus toxicodendron**                            |
| **Fever with dry cough or urticaria**             |
| **Headache better from warmth and motion**       |
| **Chill as if dashed with cold water or cold water in veins, worse least uncovering** |
| **Extreme restlessness, with continued change of position** |
| **Lameness, stiffness and pain on first moving after rest, or on getting up in the morning, better by walking or continued motion** |
| **Corners of mouth ulcerated, fever blisters around mouth and on chin** |

In addition to indicated medicine, the following Do's and Don't's must also be advised to the all the patients:

**Do's**

- Take adequate bed rest.
- Rehydration plays a major role and all efforts must be directed to maintain adequate fluid intake. Patients who are able to tolerate oral fluids must take oral rehydration solution, fruit juice, lime water (Shikanji), coconut water or plain water to prevent dehydration. Patients who are not able to tolerate oral fluids need intravenous fluid therapy.
- Take normal regular diet. Diet should be low in fat, low fibre, non-irritating and non-carbonated
- If the fever is more than 102°F, do continuous cold sponging, till it recovers. If it is not controlled suitable antipyretics such as paracetamol can also be given safely with Homoeopathic intervention.
- Report back immediately if any of the “warning signs” appear.

**Don't's**

- Do not panic.
- Aspirin / Disprin/acetyl-salicylic acid /ibuprofen or other non-steroidal anti-inflammatory agents (NSAIDs) must be avoided, as these may aggravate gastritis or bleeding.
Management of cases with warning signs

Advise patients/parents to return immediately for review if any of the following occur:

1. Severe and continuous pain in abdomen
2. Bleeding from the nose, mouth and gums or skin bruising
3. Frequent vomiting with or without blood
4. Black stools, like coal tar
5. Excessive thirst (dry mouth)
6. Pale, cold skin, cold and clammy extremities
7. Restlessness, or excessive sleepiness/drowsiness
8. Clinical deterioration with reappearance of fever
9. Inability to tolerate oral fluid
10. Not passing urine for more than 6 hours

Cases with dengue haemorrhagic fever and dengue shock syndrome require immediate evaluation of vital signs and degrees of hemo-concentration, dehydration and electrolyte imbalance. Close monitoring is essential and the cases require appropriate fluid replacement therapy and maintenance of hematocrit. In such cases, standard care is strongly recommended.

Homoeopathic medicines can be given only as an add on supportive therapy. The group of medicine usually indicated includes Carbo vegetabilis, Chiná, Crotalus horridus, Ferrum metallicum, Hamamelis, Ipecac, Lachesis, Phosphorus and Secale cornutum. The selection of homoeopathic intervention to be made by qualified homoeopath.

PREVENTION OF INFECTION

General Measures

1. Personal prophylactic measures
   - Use mosquito repellent creams, liquids, coils, mats, etc.
   - Wear full sleeve shirts and full pants with socks
   - Use bed nets for sleeping infants and young children to prevent mosquito bite

2. Environmental management & source reduction methods
   - Identify & eliminate mosquito breeding sources
   - Prevent collection of waters on roof tops, porticos and sunshades
   - Properly cover stored water
   - Frequently change water in water pots, flower vases, water coolers, etc.
   - Waste must be disposed properly and should not be allowed to collect

3. Biological & Chemical control for control of mosquitoes breeding
   - Use larvivorous fishes in ornamental tanks, fountains, etc.
• Use biocides or chemical larvicides for control of mosquitoes breeding
• Aerosol space spray

4. Health education
• Impart knowledge to common people regarding measures to reduce vector breeding and safeguards for preventing mosquito bites.

**Homoeopathic medicine**

• As per the principles of homoeopathy, a genus epidemicus (a drug capable of preventing the diseases) can be identified in for the sporadic and epidemic situations. The process of selection of genus epidemicus is a specialized and involves following steps:

The totality of symptoms (TOS) related to the current epidemic is formulated by in depth study of all the sign and symptoms of minimum 20-30 cases preferably from different regions to cover the complete spectrum of diseases in the community.

The TOS to be analyzed using appropriate repportorization process and arrive at a group of medicines. These medicines are required to be given to these cases on the basis of individualization. The medicine, which is most frequently indicated and has potential of providing the quick treatment to the patient, is the genus epidemicus. This medicine in 30 potency to be used daily two doses for three days.

Traditionally, *Eupatorium perfoliatum*30 is the preventive medicine for the majority of the sporadic and epidemic situations that can be safely taken twice daily for three days as prophylactic.
BIBLIOGRAPHY AND FURTHER READINGS: