

Dengue cerebral pain, muscle pain and joint misery



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Dengue fever is a deadly mosquito-borne viral infection (1, 2). It is caused by the bite of female mosquito by *Aedes aegypti*(3) and in some cases also by *Aedes albopictus*, infected with the virus.(4-6) Presently, unable to isolate any vaccine for this infection but numerous are still in the process of clinical trials. (4, 7, 8). Dengue virus is RNA virus, which is single-stranded. There are 4 types of viruses that cause dengue, named DEN-1, DEN-2, DEN-3, and DEN-4.

(6, 9-19) Yet not all four types are found in particular region like Indian sub-continent mainly restricted by the type 2 and 3. Moreover, it has been documented that the Pakistan, Sri Lanka, India and Bangladesh are among those countries that are severely affected by the Dengue(20). In Pakistan, dengue is considered now one of the major health burdens with numerous incidences of complicated cases having low socioeconomic backgrounds.(21) In past 50years, it has been documented that the incidence of DF has greatly increased by 30 fold.

(22, 23) Moreover, it's been estimated that in 128 countries, approximately 3900 million people are at risk of Dengue infection. Every year, estimated 500, 00 people , suffered by dengue fever get hospitalization, in which large proportion are children.(23) According to the sources, Dengue fever had found in China, Indonesia, Malaysia and Thailand in 1980. Later on, it found in India in 1990 whereas in Bangladesh it found in 2005(4)People suffering from dengue infection are present asymptotically in 80% of the cases or indicate with the fever and chills(5).

Some cases come up with the extreme conditions that can be life-threatening to some extent. The incubation period is considered to be 3-14 days or usually 4-7 days (6, 13). Abrupt fever, cerebral pain, muscle pain and joint misery are considered the classical manifestations of Dengue fever (24). Since this condition originates from the muscle and joint pain, it is also referred to as Break bone fever (5, 16, 24, 25). Dengue fever course can be categorized into three phases: febrile, basic and Recovery (5). Febrile Phase: this phase lasts for almost 2-7 days (15). It includes high fever, bleeding from mouth and nose, severe headache, muscle and joint pain, decrease of appetite, diarrhea, cerebral pain (10, 13, 26). Critical Phase: This phase attains in some cases.

This stage can lead to leakage of plasma from blood vessels and may have wide chances of organ dysfunction and shock and hemorrhage as well. Usually, individuals get the dengue infection; a second time will be at great risk of hemorrhage and this eventually causes death in most of the cases. (13) Recovery Phase lasts up to 2-3 days which includes seizures, itching, consciousness (varying level), slow cardiac rate. In adult patients, fatigue remains for weeks (27). Diagnosis is based on numerous factors like clinical features (high fever, fatigue, diarrhea, vomiting, and nausea) (14, 28), hematological abnormalities and IgM antibody test showing positive results (12, 15, 22, 27, 29). They all play a significant role in making the diagnosis.

Apart from it, virus isolation, viral nucleic acid detection by PCR, virus serotypic/genotypic characterization can be done to confirm the diagnosis (16, 27). Currently, no medicine and treatment are available for Dengue fever (13, 27, 30). It has been documented that majority of the

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patients recover from it(13). Timely rest, a good proportion of oral fluids and antipyretics show remarkable improvement in out-patients.

Yet strong monitoring need to get done for warning signs as well as vital signs. In-patients, requiring ICU care, blood products, inotropic support and IV fluids are usually in small number(13). Platelets transfusion seems to be indicated in few cases.

A strong myth is associated with improving Platelet count that carica papaya juice dramatically helps in it. According to the resources, investigation for the use of anti-viral drugs in dengue fever is still in pipe line.(23)We strongly need to isolate vaccines for dengue fever effective against all strains(15).

Presently, after numerous randomized trials, dengue vaccine named, Dengvaxia, (CYD-TDV) has been licensed, yet hasn't approved for use.

Moreover, we need to get some radical measure to minimize the incidence of dengue fever like mosquito control(23). Awareness programs should plan in small areas to create awareness regarding this infection(16). Misconceptions related to dengue fever have created havoc among people.

To address such issues, health care providers need to join their hands at all levels. Following key points has been documented that claim to be of great help in patients with dengue fever or as preventive measures:

- Dengue can be suspected in patients having fever more than three days, regardless the presence of other clinical symptoms(23)
- Avoid prescribing Aspirin/Ibuprofen to Dengue patients for fever control(23)
- Go for other laboratory investigation to rule out the cause of fever if the present syndrome doesn't comply with the Dengue(23).
- Never go for medicines

like steroids, antibiotics or antiviral agents(23). Don't let the serious patient go home, without observing absences of fever for 24-hrs, improving platelet count, overall improvement in appetite and clinical features(23). Don't need to isolate Dengue fever patients. They are not prone to transfer infection to others.

All you have to do is to maintain standard precautions like screening hospital windows, and use of mosquito nets in the ward/room(23). Never go for platelet transfusion or other blood product until find platelet count less than 10, 000 and significant bleeding(23). Make sure the use of mosquito repellents, full covered clothes as preventive measures(30). Health awareness program should conduct to minimize the incidence of dengue.