

Letter to the Editor

[The Editor is not responsible for the views expressed by the correspondents]

Dengue — The Remedial Steps

SIR, — The dengue recently have become more rampant and awareness regarding remedial steps both by public and health workers will be helpful in long way in curbing the dreadful disease.

(1) People need to be aware that dengue is of four serotypes. Infection from one serotype gives life long immunity to that but only cross protection to other 3 serotypes for 2 years, due to sharing of seventy percent aminoacid sequences identity. Secondary infection is more severe due to present antibodies. Primary prevention is best solution.

(2) Destroying breeding of dengue vector and emphasis on proper sanitation, avoiding exposure of body and use of mosquito nets and repellants specially when dengue is rampant.

(3) Notification of disease to government authorities for better policy making.

(4) Educating people about prevention and primary care of the disease as delay in treating patients increases mortality from 1-5 percent to 20 percent.

(5) Patients having comorbidities like diabetes, kidney disease, hypertension, elderly, obese, pregnant women, etc should be taken care at the earliest by the physicians and not home treated.

(6) People should be made aware that late presentation of dengue fever to the hospital leads to increased development of dengue haemorrhagic fever, dengue shock syndrome, multi-organ involvement like acute kidney injury, and increased mortality.

(7) The guide lines for hospital admission — if the platelet count is <100,000, or platelet count between 100,000-150,000 with a rapid drop in platelets, fever for three days with any warning signs such as abdominal pain, persistent vomiting, mucosal bleeding, lethargy and restlessness.

(8) Elisa based NS1 tests best and can not be false positive. NS1 antigen is tested positive in first few days and has a sensitivity of 60-90%. IgM antibody become positive after the 5th day of illness. Timing of testing should be made aware. In primary dengue IgG becomes + at the end of 7 days while IgM+ is after day 4.

Value of IgG and IgM with thrombocytopenia and looking sick on day 3 or 4 of illness, a very high titre of IgG with borderline rise in IgM signifies secondary dengue infection and are more prone to complications.

If Immature platelet fraction IPF is >10% despite a platelet count of less than 20,000, one is out of danger

and platelet will rise in 24 hours. However if less than 5% then bone marrow not responding for at least 3-4 days and is the candidate for platelet transfusion. Better to do IPF even in borderline low platelet count. Low mean platelet volume MPV are functionally not good and need more attention.

(9) Public awareness through social media is fruitful.

(10) Treatment of choice is paracetamol, plenty of liquid diet to prevent hypotension.

(11) Fluid of choice in is normal saline.

(12) Platelet transfusion when platelet count is less than 10,000 or when active bleeding or purpuric spots occur.

(13) Drugs to be avoided like aspirin, ibuprofen, nimuselide, acenofenac and steroid.

(14) Storage of platelets at 24 to 26 degrees Celsius. Half life of platelets is 6 to 9 days.

(15) Goat milk, papaya leaf, kiwi fruits have no role and any benefit is due to antioxidants but can affect liver which is often deranged.

(16) While treating dengue patients, formula of 20 is very handy. That is rise in pulse by more than 20, fall of BP by more than 20, difference between upper and lower BP of less than 20, and presence of more than 20 haemorrhagic spots on the arm after a tourniquet test suggest a high risk situation and the person requires care.

(17) The primary cause of mortality is due to capillary leakage causing hypotension due to decrease in intravascular compartment volume leading to multiple organ failiure. Fluid replacement amounting to 20 ml per kg body weight per hour must be administered. This must be continued till difference between the upper and lower blood pressure is over 40 mm of mercury or the patient passes adequate urine. This is sufficient and giving unnecessary platelet transfusion can make patient more deteriorated.

Eye sees what the mind knows. So education and awareness of dengue control and management is key to curbing effectively this dreaded disease.

¹MBBS, MS, MCh (Plastic Surgery),
Hony IMA Professor,
Department of Plastic Surgery,
Getwell Hospital, Varanasi

Sudhir Singh¹
Manoj Kumar Srivastava²

²MBBS, MD, Professor,
Department of Medicine,
Narayan Medical College, Bihar