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Outbreak of dengue infection in rural Davangere, Karnataka

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Sir,

Dengue infections are a significant cause of morbidity and mortality and lead to adverse economic effects in many developing tropical countries[1]. The incidence of dengue fever is on the rise worldwide, and in some areas of Asia, complications of the disease are a leading cause of serious illness and death in children[2]. Over the past two decades in India there has been dramatic global increase in dengue fever , dengue haemorrhagic fever, and dengue shock syndrome and their epidemics[3-6].

The identification of dengue cases is by distinct clinical features, but they can present with varied manifestations. Dengue remains a puzzling disease in many aspects, such as the virus-vector and host-virus relationship, and clinical expression variability[3]. The dengue epidemics in India are cyclical and are more frequent, expanding geographically into the rural areas and all forms of serotypes are circulating in the community[7]. Five hundred seventy patients aged admitted to tertiary care hospital of S. S. Institute of medical sciences and research centre, Davangere, Karnataka from June 2009 and May 2010. Of the 570 patients investigated for dengue, 123 were positive for NS1 antigen and dengue IgM antibodies, of these 75 (61.8%) were males and 48 (38.2%) were females. Their age ranged from 2 years to 15 years with the mean age of 9.5± 3.2 years. According to WHO classification dengue fever was diagnosed in 56 (45.5%), dengue hemorrhagic fever in 37 (30.1%) and 30 (24.4%) dengue shock syndrome. The mean duration of fever in this study was 8 days (4.5 to 9 days) and the longest duration of fever was more than 4 weeks in 6 patients.

Among the various clinical features, fever was the most common clinical presentation occurring in all patients on presentation. There was no specific pattern of fever and height of fever ranged from 38 ℃ to 40 ℃ . Other common clinical features were retro orbital pain (61%), flushing in 65% and rashes were seen in 74.8%. acute respiratory distress syndrome was seen in 27.6%, hepatomegaly in 22.8%, malena 10 (8.1%), ascitis in 22.8% and encephalopathy in 5.7%. Peripheral smears for malaria and serology for typhoid were negative in all cases. The mean hematocrit was 47 (38.2%) at the time of admission. Thrombocytopenia (platelet count < 100 000/mm^3) was present in 113 (91.9%) and leucocytopenia (TLC<4 000/mm^3) in 96 (70%). Patients ALT and AST > 100 IU/L was present in 27(22%) cases.

Ten dengue shock syndrome (8.1%) patients died. The probable reason was the patients were brought to our hospital very late and at admission had profound shock, unconsciousness and expired within 24 h of admission. Rest all the patients were managed with intravenous fluids and recovered uneventfully. Hence outcome was good in patients who were referred early.

In conclusion, clinical manifestations of dengue as seen by us in Davangere, Karnataka over the last few years appear to be different from those seen in other parts of the country, or even in the same region in earlier epidemics. The manifestations also seem to be changing over this period. Dengue fever and dengue haemorrhagic fever/dengue shock syndrome are not the only clinical presentations. Encephalopathy, hepatomegaly and acute respiratory distress syndrome is an important presentation in hospitalized children. The spectrum of findings may be

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explained by the presence of different circulating serotypes in this region. It would be interesting to correlate serotype with clinical features in this infection. Molecular diagnosis could be the adjunct in rapid diagnosis of dengue.

Conflict of interest statement

We declare that we have no conflict of interest.

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