

Short Communication

Dengue Outbreak in Sylhet, 2023: Experience at Pediatric Unit of a Tertiary Care Teaching Hospital

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Abstract:

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Now a day's dengue is a global public health concerned, especially in tropical and subtropical countries. In 2023, dengue outbreak affects all 64 districts of Bangladesh. This prospective study was done at Department of Paediatrics, Sylhet M A G Osmani Medical College Hospital (SOMCH), Bangladesh during 2023 dengue pandemic. We found dengue test (NS1, dengue IgM) positive in only 38% children, others were diagnosed clinically. Warning signs were present in 25% cases (like diarrhea, vomiting, abdominal pain, hepatomegaly and restlessness), severe dengue were 25% cases (shock with AKI, dengue encephalitis, severe bleeding), isolated organopathy (dengue encephalitis) (16.7%) and co-infection was found in 17% cases.

Key words: Dengue, Children, Bangladesh, Encephalitis.

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Introduction:

The World Health Organization reported the highest global burden of dengue fever cases in 2023, with the disease impacting over 80 countries.¹ Dengue is a mosquito-borne viral illness primarily transmitted by infected *Aedes* mosquitoes.²

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Dengue virus [DENV]- 1,2,3 and 4 are four distinct serotypes and a potential fifth serotype (DENV-5) recently identified in Malaysia.² In the capital city of Bangladesh, Dhaka the first recognized dengue outbreak was reported in 1964.³ After then, sporadic dengue cases were reported until 2000,⁴ when Bangladesh's major cities and towns saw its first widespread epidemic.⁵ The dengue epidemic of 2023 hit all 64 districts, including Sylhet.⁶

Material and Methods:

This prospective observational study was done at Department of Paediatrics, Sylhet M A G Osmani Medical College Hospital (SOMCH), Bangladesh from July, 2023 to August, 2023. Children age less than 13 years admitted at SOMCH and diagnosed as case of dengue, were included in study.

Result and discussion:

Total 24 patients were admitted, among them, male 75% (mean age 70.83 ± 46.2 months), female 25% (mean age 75.33±42.98 months). Youngest patient was a 7 month old infant. Presenting clinical features were fever (100%),

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body ache (8.3%), severe muscle pain (4.2%), rash (4.2%), headache (4.2%), diarrhea (12.5%), vomiting (8.3%), abdominal pain (4.3%), cough (16.8%), Convulsion (16.8%) and melena (4.2%). Most of the diagnosis was done on the basis of clinical features with leukopenia and thrombocytopenia (62.5%), dengue NS1 (25%), dengue IgM (8.3%) and dengue IgM with IgG (4.2%). In most of the cases NS1 was negative. This explain as DENV2 (51.5%) and DENV3 (43.9%) were the predominant serotype in 2023 outbreak.⁷ Clinical diagnosis of admitted patients were dengue fever (62.5%), dengue hemorrhagic fever (16.7%), dengue expanded shock syndrome (shock with AKI) (4.2%) and isolated organopathy (dengue encephalitis) (16.7%). Warning signs were present in 25% cases (diarrhea, vomiting, abdominal pain, hepatomegaly and restlessness) and severe dengue was 25% cases (shock with AKI, dengue encephalitis, severe bleeding). Management was given according to national guideline for dengue management. Platelet transfusion was given to none and PRBC was given to a patient with melena. No death was encountered. These findings are little bit different from other study,⁸ as most of the cases were primary dengue (only 4.2% Dengue IgG positive). Co-infection was found in 17% patient like rickettsial fever (8.3%), hepatitis A (4.2%) urinary tract infection (4.2%). Co-infection in dengue is not so uncommon and it has effect in dengue outcome.⁹

Conclusion:

Dengue cannot be excluded by negative dengue test (NS1, dengue IgM). Isolated organopathy and co-infection are not so uncommon.

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