Case Report

Dengue encephalitis

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ABSTRACT

Dengue fever is generally not characterized by neurological manifestations, especially in infants. Here we present an 11 month old male child residing in Jalandhar, Punjab, who presented with status epilepticus and later, on investigation, was found to be Dengue encephalitis. To our knowledge, this is the first reported case from this region.

Introduction

Dengue fever, a benign syndrome caused by several arthropod-borne viruses, is characterized by biphasic fever, myalgia or arthralgia, rash, leukopenia and lymphadenopathy. [1] Severe manifestations include dengue hemorrhagic fever and dengue shock syndrome. However, neurologic manifestations are unusual (Ramos et al, 1998). [2] Here we present a case of Dengue fever with encephalitis.

Case Report

An 11 month old brought to us in state of convulsions and was managed on the lines of status epilepticus. Child also had history of fever for 5 days. Fever was continuous and not associated with rigors. On examination child had a heart rate of 160/min with respiratory rate of 50/ minute and a temperature of 101.2ºF. There was mild pallor but skin rash, icterus, lymphadenopathy, clubbing and edema were absent. Neurological examination revealed GCS of E2, V2, M4 with absence of neck rigidity or other signs of meningism. Child was under sedation so power and tone cannot be commented upon. Knee jerk reflexes were brisk. Plantar reflexes were extensor bilaterally. Respiratory system examination revealed crackles bilaterally in inframammary region. Per abdomen examination revealed hepatomegaly 2cm below right costal margin. It was soft in consistency, non tender with smooth surface and regular margin.

Investigations revealed hemoglobin of 8.3 g% and TLC of 14300/cumm, platelet count of 2.2 lakh/cumm and hematocrit of 26.6% at the time of admission. Differential count was normal. Renal function tests, random blood sugar and serum electrolytes were also in normal range. Dengue serology was negative at the time of admission. Malaria antigen test, typhi dot and viral markers were also negative. A CT scan of head revealed no abnormality. However Dengue serology was repeated after two days and was positive for IgM antibodies. LFT revealed AST 243 U/l, ALT 75 U/l. CSF examination revealed proteins 24mg/dl, sugar 69mg/dl. CSF cytology showed 2cells/cumm with differential showing all lymphocytes. It was negative for Gram staining and AFB staining. Further investigations were not done due to financial constraints of the patient. Differential diagnosis of Meningoencephalitis was kept because of high grade fever, seizure and altered sensorium, but the parameter were normal and his dengue antigen came positive so the diagnosis of Dengue encephalitis was made. During hospitalization, patient responded well to anti epileptics inj phenytoin loading then maintance 5mg/kg /day bd, inj phenobarbitone laoding and maintance 5 mg /kg bd, Inj levetiracetam 10mg/kg/dose bd. Sensorium gradually improved. Feeding was started with nasogastric tube and gradually built up and subsequently shifted to spoon feeding. Antibiotics were continued, Inj piperacillin 100mg/kg/dose and vancomycin 15mg/kg /dose 8hrly for 7 days in lieu of bronchopneumonia. Patient was discharged after 2 weeks and 5 days of admission on oral anti epileptics.

Discussion

Most dengue cases are reported in epidemics in India and other parts of the world. The dengue virus is not known to be characteristically neurotropic and only a few cases have been reported especially in children. There are some reports of nervous system involvement in children and adults in various parts of the world. [3, 4, 5, 6] Encephalitis in dengue fever is a rare entity. [4,5,6] The various nervous system manifestations reported are altered level of consciousness, seizures, pyramidal tract signs, meningeal signs, headache, encephalitis, myelitis, and Gullain Barre syndrome. [7,8] Other cases had different presentation like LGBS, myelitis, in our case only feature was encephalitis. A study from northwest India included 799 adult patients with Dengue showed that neurological manifestations were present in 21 (2.63%), 19 of whom were men with a mean age of 33.7 ± 13.9 years. The neurological diagnoses were hypokalemia with quadriparesis (7), myositis (4), encephalopathy (4), Guillain-Barre syndrome (2), acute disseminated encephalomyelitis (2), lumbosacral plexopathy (1), and intracranial hemorrhage (1). [9] The CNS manifestations in children are rarely reported and to our knowledge, so far no case of dengue encephalitis in children has been reported from this region of India.

Conclusion

This is the first reported case of dengue encephalitis from this region of India. The case is presented not only because of the rare presentation of a common disease but also to emphasize the similarities of the clinical features of dengue encephalitis with that of cerebral malaria, meningitis, and

Japanese encephalitis, which should be ruled out before a diagnosis of dengue encephalitis is made. A high index of suspicion is important to arrive at the correct diagnosis.

References

1. Kliegman R, Stanton B, St. Geme J, Schor N, Behrman R. Nelson Textbook of Pediatrics. 19th ed. Philadelphia: Saunders; 2011.
2. Ramos C, Sanchez G, Pando RH. Dengue virus in the brain of a fatal case of hemorrhagic dengue fever. J Neurol 1998;4:465-8.
3. Mehendale SM, Rodringues FM, Pinto BD. A sporadic case of dengue encephalopathy. J Assoc Physicians India 1989;37:346.
4. Koley TK, Jain S, Sharma H. Dengue encephalitis. J Assoc Physicians India 2003;51:422-3.
5. Chotmongkol V, Sawanyawisuth K. Case report: Dengue hemorrhagic fever with encephalopathy in an adult. Southeast Asian J Trop Med Public Health 2004;35:160-1.
6. Witayathawornwong P. Fatal dengue encephalitis. Southeast Asian J Trop Med Public Health 2005;36(1)200-2.
7. Thisyakorn U, Thisyakorn C, Limpitkul W. Dengue infection with cerebral nervous system manifestations. Southeast Asian J Trop Med Public Health 1999; 30: 504-6.
8. Soares CN, Faria LC, Peralta JM, Defreitas MR, Puccioni-Sohler M. Dengue infection: neurological manifestation and cerebrospinal fluid (CSF) analysis. J Neurol Sci 2006;249:19-24.
9. Koshy J, Joseph D, John M, Mani A, Malhotra N, Abraham G. Spectrum of neurological manifestations in dengue virus infection in Northwest India. Tropical Doctor 2012;42(4):191-4.

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