DENGUE HEMORRHAGIC FEVER WITH BILATERAL SIXTH NERVE PALSY

*Dr B.Kiran., Dr.Dhananjaya C.D.

Abstract:

We are reporting a case of Dengue hemorrhagic Fever with bilateral sixth nerve palsy without any other signs and symptoms of encephalitis who recovered spontaneously with only supportive management.

Key words: dengue hemorrhagic fever, encephalitis, cranial nerve palsy.

INTRODUCTION:

Dengue fever has varying clinical presentations ranging from asymptomatic infection to life threatening dengue hemorrhagic fever and dengue shock syndrome[1]. Dengue is an increasingly prevalent arboviral infection common in tropical countries including south and southeast asia. Fever,arhralgia,headache,petechial spots,rash and hemorrhagic manifestation are common features. However, neurologic manifestations are unusual[2].

CASE REPORT:

A 10 year old girl presented to PICU, RLJ HOSPITAL of Sri Devaraj Urs medical college, Kolar, Karnataka with continous, high grade fever of 10 days with severe headache, bodyache,vomiting, pain abdomen and with swelling of lower limbs. On examination the patient was febrile and drowsy, pulse was 80 beats/min, respiratory rate of 36 cycles/min, blood pressure of 80/50mmHg with temperature of 39°C with few petechial spots on the trunk and thighs. There was mild pallor,skin rashes,lymphadenopathy and edema of the lower limbs. Neurological examination revealed only bilateral convergent squint(6thnerve palsy) with normal GCS,normal tone and reflexes in all four limbs and absence of neck rigidity or kernig's sign. Respiratory system was normal but had tender hepatomegaly with just palpable spleen. Investigation revealed hemoglobin of 8 gm/dl, the intial platelet count was 60,000/mm^3,WBC count was 4,200/mm^3 with normal differential count and normal WBC morphology. The serum sodium level was 134meq/l, SGOT,SGPT, Serum bilirubin was normalexcept serum albumin was 3 gm/dl. DIC profile, blood urea, serum creatinine were normal. CSF examination and CT brain was essentially normal. Dengue serology was positive for IgM antibodies.

The patient was managed conservatively with fluid therapy(6ml/kg) and continous monitoring. She became afebrile after 7days of treatment and was discharged after 10 days. On follow up the girl was healthy and had recovered from 6th nerve palsy.

DISCUSSION:

Infection by dengue virus is commonly associated with dengue fever, dengue hemmorhagic fever and dengue shock syndrome. However in recent years it has been recognised that the virus can also cause neurological manifestations[3-12]. Many neurological manifestations of dengue

*Assistant Professors, Dept.of Pediatrics, Sri Devaraj Urs Medical College, Sri Devaraj Urs University, Kolar

fection have been described to include eadache, seizures, depressed sensorium, ehavioural disorders, neck stiffness, elirium, paralysis, cranial nerve palsies nd coma. Previously reports of eurological manifestations in dengue nfection had been referred to as ncephalopathy rather than encephalitis ecause attempts to demonstrate direct invasion of CNS by dengue virus had failed. Therefore, the pathophysiology of these neurological manifestations was thought to be secondary to prolonged DHF/ DSS as opposed to encephalitis which is defined as localised invasion of CNS[3-7]. Various physiological events were thought to lead to encephalopathy such as cerebral edema[3], cerebral hemmorhage, hyponatremia, fulminant hepatic failure[8], cerebral anoxia, micro capillary hemmorhage and release of toxic products[9]. Recent reports however have demonstrated a possible neurotropic effect of the virus. Animal studies done in mice showed that the virus could breakdown the bloodbrain barrier leading to CNS invasion, virus mediated cytokines w responsible[10]. Dengue virus type-2 has been demonstrated in the CSF of a dengue encephalitis patient. Dengue encephalitis should be considered in the differential diagnosis of acute viral encephalitis, especially in countries like India where dengue has assumed epidemic proportions. Most case series on dengue encephalitis suggest that patients with the disease have a higher tendency to develop DHF/DSS[11,12].

This case was reported because the presentation was dengue hemorrhagic fever but the only neurological manifestation was bilateral sixth nerve palsy with no other signs and symptoms of encephalitis or encephalopathy which is a very rare entity.

REFERENCES:

1. Koley TK, Jain S, Sharma H, et al. Dengue encephalitis. J Assoc Physicians India 2003; 51: 422-3.
2. Ramos C, Sanchez G, Pando RH, et al. Dengue virus in the brain of a fatal case of hemorrhagic dengue fever. J Neurovirology 1998; 4: 465-8.
3. Chauhan GS, Khangarot DK, Shah PK, Rodrigues FM. 'Encephalitis' as manifestation or co-incidence in a case of classoc dengue fever. J Assoc Physicians India 1987; 35: 658-9.
4. Hendarto SK, Hadinegoro SK. Dengue encephalopathy. Acta Paediatr Jpn 1992; 34: 350-7.
5. Kho LK, Sumarmo, Wulur H, Jahja EC, Gubler DJ. Dengue hemorrhagic fever accompained by encephalopathy in Jakarta. Southeast Asian J Trop Med Public Health 1981; 12: 83-6.
6. Sumarmo, Wulur H, Jahja E, et al. Encephalopathy associated with dengue infection. Lancet 1978; 25: 449-50.
7. Srivastava VK, Suri S, Bhasin A, Srivastava L, Bharadwaj M. An epidemic of dengue hemorrhagic fever and dengue shock syndrome in Delhi: a clinical study. Ann Trop Paediatr 1990; 10: 329-34.
8. Lum LC, Lam SK, George R, Devi S. Fulminant hepatitis in dengue infection. Southeast Asian J Trop Med Public Health 1993; 24: 467-71
9. Sumarmo, Wulur H, Jahja E, et al. Clinical observation in virologically confirmed fatal dengue infections in Jakarta, Indonesia. Bull World Health Organ 1983; 61: 693-701.
10. Chaturvedi UC, Dhawan R, Khanna M, Mathur A. Breakdown of the blood-brain barrier during dengue virus infection of mice. J Gen Virol 1991; 72(Pt.4): 859-66.
11. Lum LC, Lam SK, Choy YS, George R, Harun F. Dengue encephalitis: a true entity? Am J Trop Med Hyg 1996; 54:256-9.
12. Solmon T, Dung NM, Vaughn DW, et al. Neurological manifestations of dengue infection. Lancet 2000; 355: 1053-9. Comment in Lancet 2000; 35: 2163-4, Lancet 2002; 360: 261.