

Atypical Presentation of Dengue

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ABSTRACT

One of the common vector borne diseases in tropical countries like India is Dengue fever. Dengue has become one of major public health problem in this zone. Acute disseminated encephalomyelitis is a very rare manifestation seen after dengue fever. After clinical examination of the patient and positive serology for dengue, a typical finding on Magnetic resonance imaging helps in confirming the diagnosis. Here we are reporting a case of ADEM which developed after dengue fever.

Key words: Dengue fever, Demyelinating lesion, Immune mediated

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INTRODUCTION

In the past years we have seen many endemics of dengue in both urban and rural areas of India. The manifestations of dengue fever are because of the 4 serotypes of this virus. Type 2 and 3 are the main serotypes which are responsible for causing the neurological manifestation of acute disseminated encephalomyelitis. The serotypes of this virus are linked immunologically but do not have cross protection. Here the case is of atypical presentation of acute encephalomyelitis after dengue fever.

CASE REPORT

History

A 43 year old female patient presented to the emergency department of Sree Balaji medical college with fever of 102 F, it is associated with weakness since 5 days, headache, neck pain and chills. She had no co morbidities. Fever serology was done and it turned positive for dengue. Symptomatic treatment was given and patient was discharged when she was symptomatically better. Four days later she presented to the emergency department with urine retention and altered sensorium.

Examination

On examination patient was conscious, not oriented to time and place, she was afebrile. PR-8/min, BP-110/70, RR-22/min, TEMPERATURE-a febrile chest sounds were normal and lung fields were clear. Per abdomen was soft and bowel sounds were heard and no organomegaly was

noted. She had altered sensorium and no neck stiffness.

Course

The patient was admitted and all the routine investigations were sent. CBC showed WBC 7,900/ μ L, haemoglobin 7.8 g/dl and CRP was 18 mg/dl. No abnormality was detected on cerebral angiogram. CSF analysis showed total leukocyte count 129 cells/ μ l and predominance of lymphocytes (lymphocytes were 81%) and CSF protein level was found to be elevated at 76mg/dl. Serology for other viruses like cytomegalovirus, Epsteinbarr virus and herpes simplex virus turned out to be negative she was started on injection amoxicillin (1000mg) and potassium clavulanic acid (200mg) three times a day and injection ceftriaxone 1gm four times a day and acyclovir 250mg twice a day. Due to deterioration patient was moved to intensive care unit in Sree Balaji medical college, second CSF examination was done which showed WBC at 7400/ μ l with predominance of neutrophils this time {neutrophils were at 89%}. culture of CSF was negative. MRI of brain was done and it revealed lesions on left cerebellar peduncles. Nodular enhancement of the bulbar lesion. Hyper intense signal was seen on supra tentoria level on FLAIR technique. CSF was subjected to PCR for different organisms were done and it turned out to be negative. Polyclonal hyper gamma globulin without monoclonal peak was noted after electrophoresis of plasma proteins was done. After a comprehensive discussion with various specialists it was concluded that acute disseminated encephalomyelitis was the most possible explanation taking all the blood and imaging studies into consideration. Therefore patient was immediately started on injection methyl prednisolone mg/kg/day for a 3 day course and it should be tapered to tablets. Patient improved symptomatically and was discharged 2 weeks later and is on regular follow up.

DISCUSSION

Here we reported a case of ADEM in a 41 year old female post dengue fever. Atypical manifestations like ADEM pose a tough challenge to doctors. ADEM occurs after an infection or a vaccination [1]. Incidence is about 8 in one million [2]. This condition is immune mediated and demyelinating. The pathophysiology involves an autoimmune response is invoked by T cells and myelin is targeted. Others viruses like Cytomegalovirus, Enterovirus and herpes simplex virus and bacteria like Borrelia burgdorferi [3] have caused this condition. Early radiological investigations can provide adequate insight for effective interventions. ADEM is generally seen after one week of a precipitating conditions mentioned above. In this scenario after 13 days of clinical manifestations of dengue fever ADEM has developed. For effective intervention imaging modality of choice is MRI brain as it provides an adequate insight for this neurological complication of dengue. In this conditions lesions have been identified in cerebellum and brain stem, basal ganglia can be involved in a few. In Grey matter single or multiple lesions can be noted [4]. Presence of demyelinating lesions along with presence or absence of foci of haemorrhage is pathognomonic for this particular condition [5]. Early use of glucocorticoids has been shown as an important prognostic value in this condition. This is a very rare manifestation noted in dengue which should be diagnosed early and treated aggressively in a timely manner.

CONCLUSION

In a country like India where dengue is endemic, Complications like ADEM must be taken into consideration. Proper evaluation of the case and timely effective treatment can reduce the mortality rate drastically. Tertiary care centres like Sree Balaji medical college and hospital can contribute to decreasing mortality in these conditions.

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