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ORIGINAL RESEARCH PAPER

Ophthalomology

A RARE PRESENTATION OF DENGUE WITH BILATERAL PAPILLEDEMA

KEY WORDS: dengue, papilledema, sixth nerve palsy

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ABSTRACT

Dengue fever is an arboviral disease of significant public health importance in India. The multisystem involvement in dengue is a major cause of mortality and morbidity in the affected individuals. The ophthalmic manifestations in dengue involve both the anterior and posterior segment out of which few are vision-threatening and warrants immediate attention. Here, we report a rare presentation of papilledema with sixth nerve palsy in a case of dengue.

Case Report

A 25 years old female presented to the casualty department with high grade, intermittent fever for seven days associated with myalgia. She also gave history of few episodes of non projectile vomiting. Hospitalization was done and routine investigations were carried out. Leukopenia was noted with relative lymphocytosis. Hemoglobin and platelet count were within normal limits. Liver Function Test, Renal Function Test and serum electrolytes were found to be normal. Widal for typhoid, Quantitative Buffy Coat for malaria and IgM for leptospirosis turned out to be negative. The patient was started on IV fluids and adequate hydration was given. On the second day of admission, she developed headache and diplopia which was binocular. Patient was referred to ophthalmology department for evaluation. On examination, head posture and facial symmetry was normal. Convergent squint was present with Right eye esotropia of 30 prism diopters. Extra ocular movements showed bilateral abduction restriction. Anterior segment examination was normal. Visual acuity and color vision was found to be normal. Posterior segment examination revealed bilateral papilledema. Further investigations were directed towards the common causes of acute febrile illness. Dengue IgM and dengue NS1 turned out to be positive. MRI brain did not reveal any significant abnormality. A likely diagnosis of dengue induced encephalitis with bilateral 6th nerve palsy was made. Patient was started on Intravenous mannitol and Intravenous solumedrol with supportive measures after ruling out contra indications. On review after five days in ophthalmology department, patient had improved dramatically with an ortho phoric eye and her diplopia relieved. She showed full extraocular movements in all gaze and Fundus showed no progression in papilledema.

Fig 1-initial Presentation Showing Convergent Squint In Right Eye

Resolution of squint after 5 days of treatment

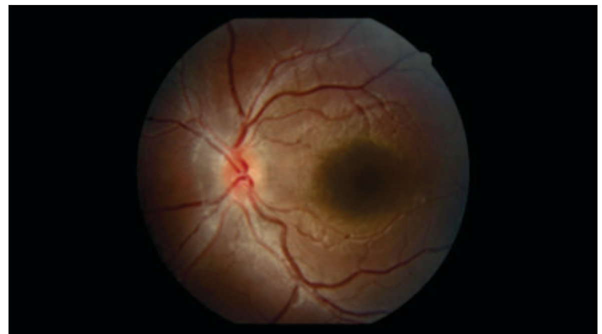

Fig 2 Fundus Showing Papilledema

DISCUSSION

Dengue fever is a major global public health problem in endemic countries. (1) According to many studies, maculopathy and retinal vasculopathy were the most common neuro ophthalmic complications of Dengue whereas optic neuropathy and cranial nerve palsies were the least common. (2).Dengue with isolated sixth nerve palsy was rare with only a few reported cases. (3,4).Facial nerve palsy and oculomotor nerve palsy were the other cranial nerves affected in Dengue.(5,6) .In our case, the patient presented with an acute onset sixth nerve palsy along with bilateral papilledema .The infections which elicit a similar clinical picture including cerebral malaria, leptospirosis, Tuberculosis and Typhoid were ruled out. Dengue was confirmed with relevant serological tests. MRI brain was normal and patient had remarkable resolution of ocular symptoms and signs within five days of treatment.

The exact mechanism of neuro ophthalmic manifestations of dengue is not identified but metabolic disturbances induced encephalopathy, direct viral effect causing encephalitis and immune-mediated mechanisms are all postulated in the pathogenesis. Though the mainstay of treatment in Dengue is supportive, steroids in the form of pulse therapy have been used successfully in the management of neurological and ophthalmic complications of dengue virus (7).Nevertheless, further clinical trials are needed to evaluate the dose and routes of administration of steroids in the neuro- ophthalmic manifestations of Dengue.

CONCLUSION

Since dengue is endemic in our country it is pertinent for both the treating physician and the ophthalmologist to be aware and vigilant of its various clinical manifestations. This case is presented to highlight the role of investigations for dengue in febrile cases with neuro- ophthalmic manifestations.

Disclosure :

The authors report no conflict of interest in this work .

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