Reply to Pediatric optic neuritis: Points to ponder

Sir,

Thank you for showing interest in our study[1] titled "Clinical profile and neuroimaging in pediatric optic neuritis in Indian population: A case series." We have tried to provide all details of the cases for the clarification of the queries raised. Although it is common to have optic neuritis following vaccination, we had no cases of the same following vaccination in our series.

The patient diagnosed with acute disseminated encephalomyelitis (ADEM) in our series was an 8-year-old boy, who presented with loss of vision in both eyes for 3 days, along with a history of headache associated with vomiting and altered sensorium. He also had a history of chikungunya (viral fever) 2 weeks earlier. Investigations such as magnetic resonance imaging (MRI) brain scan showed multiple nonspecific lesions in the deep cortical matter, bilaterally, while cerebrospinal fluid (CSF) analysis revealed leukocytosis and absence of oligoclonal bands. The child recovered within 15 days with no signs of recurrence till 1 year of follow-up. Clinical presentation and relevant investigations suggested diagnosis, most likely of monophasic, polysymptomatic ADEM following a viral infection. In a study comparing the features of ADEM and multiple sclerosis (MS), it was found that encephalopathy was present in 10/24 patients with ADEM, whereas no patient had encephalopathy in the MS group ($P = 0.001$, odds ratio = 0.03) which suggested that for a patient presenting with encephalopathy at the first demyelinating event, MS is less likely compared to a child without encephalopathy.[2,3]

We have mentioned four cases with MS; among these, one patient (15/F) developed transverse myelitis with urinary

incontinence 3 months following the attack of unilateral optic neuritis. MRI spine scan showed active focal-enhancing white matter lesion at D9 level with no involvement of consecutive spinal segments. The patient was negative for neuromyelitis optica (NMO) antibodies. Sequential MRI brain showed lesions which fulfilled McDonald's criteria for dissemination in space and time. CSF analysis was not done as patient and parents denied consent for it. In accordance with the criteria mentioned in a recent article[3] for diagnosing NMO with negative aquaporin antibody, the presence of acute myelitis/optic neuritis should be associated with normal MRI brain/nonspecific lesions/longitudinal extensive transverse myelitis (LETM), etc.[3] In our patient, acute myelitis was associated with MRI brain diagnostic of MS and the absence of LETM in MRI spine. Based on all these features, diagnosis of relapsing-remitting MS was made by the consulting neurologist.

We found abnormalities in the MRI scan of the brain in 26 of 40 patients. Among these 26 patients, only ten patients had focal demyelinating lesions, involving areas of the brain other than the optic nerve. The remaining 16 patients showed other abnormal findings such as isolated optic nerve enhancement (14), tubercular meningitis (1), and ADEM (1) as mentioned in our article.

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Conflicts of interest

There are no conflicts of interest.

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