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Clinical profile and neuroimaging in pediatric optic neuritis in Indian population: A case series.

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Abstract

PURPOSE OF THE STUDY:

The purpose of this study was to report clinical features, neuroimaging, and visual outcome in pediatric optic neuritis (ON) in Indian population.

MATERIALS AND METHODS:

This is a retrospective study of children up to the age of 16 years, diagnosed with ON, that presented at pediatric and neuroophthalmology clinic of a tertiary eye care center, in South India, within the period of 2010-2015.

RESULTS:

We identified 62 eyes of 40 children diagnosed as ON within the study period. The mean age was 11.15 ± 3.24 years (1-15 years) with mean follow-up of 13 months. In this series, there was female preponderance (67%). Mean logarithm of the minimum angle of resolution visual acuity at presentation was 1.14 ± 0.93, which after treatment recovered to 0.10 ± 0.26 at final visit ($P < 0.001$). Involvement was bilateral in 22 children (55%) and recurrent in 3 eyes of 3 children. Preceding febrile illness was reported in seven cases (18%). Four (10%) cases were diagnosed as multiple sclerosis (MS), one with neuromyelitis optica , and one with acute disseminated encephalomyelitis. One case was associated with tuberculous meningitis, 1 with septicemia, and 1 with bilateral maxillary sinusitis. Neuroimaging studies of optic nerve in 14 children demonstrated isolated optic nerve enhancement. Magnetic resonance imaging brain revealed white matter T2 hyperintense lesions separate from optic nerve in ten cases, of which four cases were diagnosed as MS.

CONCLUSIONS:

Bilateral presentation was common, association with MS was low. Papillitis was more frequent than retrobulbar neuritis and prognosis was good in pediatric ON in Indian population