

Abstract

Background: Optic neuritis is a primary inflammation of the optic nerve that affects Caucasian population of often during spring. It is caused by peripheral activation of T-cells that cross the blood brain barrier causing delayed type IV of hypersensitivity reaction.

Aims: Parainfectious optic neuritis is the most common form in children, it may also occur following vaccinations.

Diagnosis must be confirmed by OCT which shows thinning in RNFL, VEP and MRI which is the technique of choice after a diagnosis of optic neuritis.□

Conclusion: Treatment of pediatric ON, whether it is isolated or in association with multiple sclerosis, neuromyelitis optica, or acute disseminated encephalomyelitis, is similar.

Luckily, children with ON tend to recover faster than adults to an almost normal visual acuity.

Keywords: Optic neuritis, Parainfectious, Multiple sclerosis, Acute disseminated encephalomyelitis

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List of Abbreviations

ADEM	Acute disseminated encephalomyelitis
CNS	Central nervous system
CSF	Cerebrospinal fluid
DT	Diffusion tensor
EBV	Epstein-Barr virus
FLAIR	Fluid attenuated inversion recovery
HLA	Human leucocytic antigen
LETM	Longitudinally extensive transverse myelitis
MRI	Magnetic resonance imaging
MRS	Magnetic resonance spectroscopy
MS	Multiple sclerosis
MT	Magnetization transfer
NMO	Neuromyelitis optica
OCT	Optical coherence tomography
ON	Optic neuritis
ONTT	Optic neuritis treatment trail
PL	Perception of light
RAPD	Relative afferent papillary defect
RNFL	Retinal nerve fiber layer
SD-OCT	Spectral domain optical coherence tomography
SLE	Systemic lupus erythromatosis
STIR	Short T1 inversion recovery technique

≡ List of Abbreviations

TD_OCT	Time domain-optical coherence tomography
TM	Transverse myelitis
TPE	Therapeutic plasma exchange
VA	Visual acuity
VEP	Visual evoked potential
VZV	varicella zoster virus
TPE	Therapeutic plasma exchange

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Introduction





Aim of the Work





Chapter 1

Anatomy of Optic Nerve





Chapter 2

Pathophysiology of Optic Neuritis





Chapter 3

Epidemiology of Optic Neuritis in Children





Chapter 4

Aetiology of Optic Neuritis in Children





Chapter 5

Ocular Manifestations of Optic Neuritis in Children





Chapter 6

Diagnosis of Optic Neuritis in Children

