
EDITORIAL

Optic Neuritis

Optic neuritis (ON) is the most common form of optic neuropathies. The incidence of optic neuritis varies greatly among nations. Currently, the overall national data on the prevalence of optic neuritis in Indonesia remain unknown. However, several centers in certain cities have reported incidents of optic neuritis. There are 152 cases in 3 years in Jakarta, 24 cases in 2 years in Manado, and 35 cases in a year in Bali. The Indonesian Neuro-ophthalmology Society (INANOS) has also conducted a survey of 14 ophthalmologists from 11 hospitals in Indonesia which showed that the average incidence of optic neuritis reached 40 cases per year in each center.

Optic neuritis is generally divided into two types, typical and atypical. The typical type of optic neuritis is related to demyelinating lesions associated with multiple sclerosis (MS). The typical type (MS-ON) is often seen in healthy young women from 18 to 50 years old. Symptoms include pain on eye movement followed by a unilateral reduction in visual acuity. In patients with no prior medical history, optic neuritis is frequently seen as the initial manifestation of multiple sclerosis. Therefore, an ophthalmologist plays a very important role in recognizing and identifying the likelihood of an early diagnosis of MS through the emergence of optic neuritis so that patients with MS can receive prompt treatment. Apart from these conditions, an optic neuritis is considered atypical.

The atypical type commonly manifest as painless decreased in visual acuity which can occur both unilaterally and bilaterally. As more antibody-associated optic neuritis was continuously discovered, various diagnostic classifications expanded into subtypes of the atypical group. The finding of anti-aquaporin 4 (AQP4) antibody indicates an optic neuromyelitis (NMO). Nonetheless, seronegative results of this examination can occur so that the classification of optic neuritis accompanied by transverse myelitis is more broadly referred to Neuromyelitis Optic Spectrum Disorder (NMOSD). NMOSD-ON is more common in Asian populations with a predominance of incidence in women. Decreased visual acuity occurs on one side of the eye or both, can be preceded by symptoms of brainstem lesions such as nausea, vomiting, hiccups, vertigo, hearing loss, trigeminal neuralgia, and neuroendocrine disorders. NMOSD shows more severe initial symptoms with a worse prognosis than the other types of ON. Other antibodies such as myelin oligodendrocyte (MOG) may be found in seronegative AQP4 cases. This group was then classified as MOG-ON. Although considered included in the NMOSD, this type has different characteristics. MOG-ON is more evenly distributed between women and men, tends to occur bilaterally, and shows moderate to severe initial symptoms but gives a better prognosis. Various studies regarding the association of other antibodies in optic neuritis are still ongoing such as anti-glial fibrillary acidic protein antibody-associated meningoencephalitis and anti-glycine receptor alpha1 subunit antibody which are highly expressed in the optic nerve. In addition to the role of antibodies, infectious conditions are also the potential cause of atypical ON in the form of papillitis (optic disc edema), retrobulbar optic neuritis (normal optic disc), and neuroretinitis (optical disc edema with macular star). Underlying infections commonly include tuberculosis, syphilis, HIV, Varicella Zoster, Bartonella, and Lyme disease.

All of these studies were obtained in purpose to achieve the best choice of treatment for optic neuritis. Up until now, the guideline for the management of optic neuritis, including in Indonesia, refers to the Optic Neuritis Treatment Trial (ONTT) which recommends the use of

IV methylprednisolone in ON patients. Unfortunately, this study is considered not generally applicable to all optic neuritis patients since it included vast majority of Caucasian population (only 1,5% of Asian population) and put unilateral optic neuritis as its inclusion criteria. Moreover, this research was carried out before the discovery of various antibody associated with optic neuritis which now gives enlightenment in understanding the pathology of optic neuritis. Other therapies such as plasma exchange therapy and neuroprotective agents are also the option for the treatment of optic neuritis. Further studies are still needed to find the most appropriate treatment for each type of optic neuritis affecting people from different races.

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