WY-DUR
Wyoming Drug Utilization Review Board
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January 10, 2006

Dear Doctor:

March is National Multiple Sclerosis Education and Awareness month. As a part of the educational effort of this event, the Wyoming Drug Utilization Review Board would like to review with you the association between optic neuritis and multiple sclerosis. As the healthcare professional most likely to diagnosis optic neuritis, your assistance in early identification of potential multiple sclerosis patients is invaluable.

Optic neuritis has an incidence of 1-5 cases per 100,000 persons yearly. It is most common in Caucasians, high latitudes and in the spring, especially among women aged 20-49 years.[1]

The risk of development of clinically definite multiple sclerosis (CDMS) increases with time for patients with optic neuritis. One study of patients with an isolated incidence of optic neuritis showed the risk of developing CDMS at 10 years was 39% but by 40 years had risen to 60%. This risk increases in women, patients with retinal vascular abnormalities, HLA-DR2 positive patients, and patients with oligoclonal bands on cerebrospinal fluid examination. However, the strongest predictor of the development of CDMS is the presence of asymptomatic white-matter lesions seen on a brain MRI. In the Optic Neuritis Treatment Trial (ONTT), patients with three or more brain lesions had a 5-year risk of developing CDMS of 51% versus 16% for patients with no lesions. Additionally, the risk of developing early MS increases if patients have asymptomatic spinal cord lesions in addition to brain lesions. In one study of optic neuritis patients with both spinal and brain lesions, 48% developed multiple sclerosis within one year.[1]

Treatment with oral prednisone alone increases the recurrence rate of optic neuritis and is not recommended. It is still controversial if treatment with intravenous corticosteroids decreases the long-term development rate of multiple sclerosis or the long-term disability of MS patients. New studies are looking at the efficacy of immunomodulation agents(interferon ß-1b, interferon ß-1a and glatiramer acetate) in reducing the risk of developing MS.[2] Further information on both corticosteroid and immunomodulation agent treatment controversies can be found in: Arnold AC. Evolving management of optic neuritis and multiple sclerosis. Am J Ophthal 2005;139:1101-1108.

It is important to discuss the risk of the development of MS with optic neuritis patients despite the fact that many will never develop the disease. Patients presenting with an initial episode of idiopathic demyelinative optic neuritis with no history of multiple sclerosis should be presented with the option of a brain MRI to determine their risk of development of MS.[1,2]

Thank you for your continued commitment to caring for patients.

Sincerely,

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References

Copies of all references are available from the Wyoming Drug Utilization Review board.

1. Hickman SJ, Dalton CM, Miller DH, Plant GT. Management of acute optic neuritis. *Lancet* 2002;360(9349):1953-62.
2. Arnold AC. Evolving management of optic neuritis and multiple sclerosis. *Am J Ophthalmol* 2005;139(6):1101-8.