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Multiple Sclerosis and Panuveitis: A Rare Association

Multipl Skleroz ve Panüveit: Nadir Bir Birliktelik

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Dear Editor,

Multiple sclerosis (MS) is an inflammatory demyelinating disease of the central nervous system (CNS) and is the most common cause of neurological disabilities in young adults. Ocular symptoms are commonly observed in MS. The most common ocular symptom in patients with MS is optic neuritis (ON).

Uveitis is only associated with MS in 1% of patients (1). Uveitis and particularly panuveitis are not often reported in patients with MS (2,3). Here we report a case of panuveitis associated with MS.

A 28-year-old right-handed male presented in December 2012 with complaints of numbness in the right arm and leg. Neurological examination revealed right hemiparesis and hemihypoesthesia. He had a history of epilepsy, and his mother had Sjogren syndrome. He reported that the numbness in the right arm and leg had started 2 years ago and he was then diagnosed with vasculitis, and thus, was administered 300 mg/day acetylsalicylic acid. Complete blood count, serum biochemistry, and sedimentation rate were normal. Immunological tests, including antinuclear, antiDNA, and antiphospholipids antibodies; laboratory tests for Lyme disease; ENA screening for Sjogren syndrome, syphilis, toxoplasmosis, hepatitis, HIV, CMV, tuberculosis, and sarcoidosis; and Schirmer's and pathergy tests were negative. Magnetic resonance imaging of the brain revealed periventricular and pericallosal hyperintense lesions that were typical of MS (Figure 1, 2). Cerebrospinal fluid analysis revealed a cellular count of <3 cells/mm^3 and protein level at 0.5 g/L with oligoclonal bands. His visual evoked potential revealed a delayed left P100 latency at 139.5 ms. He did not have any ocular symptoms. On ophthalmological evaluation, no ocular abnormalities were found. His ipsilateral delayed P100 latency was considered to be secondary to optic neuropathy. Immunomodulatory therapy (interferon beta 1-a) was initiated following the diagnosis of MS. He was admitted to our department in June 2013 with a complaint of decreased vision in the right and left eyes since the previous 2 days. Ophthalmoscopic examination of both the eyes revealed bilateral panuveitis. The patient was diagnosed with panuveitis associated with MS, and combination therapy with oral prednisolone at a dose of 64 mg/day and azathiopurine at a dose of 100 mg/day were initiated. The patient is still being followed up at our MS polyclinic without any new attack since 2013.

Multiple sclerosis can cause various symptoms, including numbness, weakness, visual impairment, loss of balance, dizziness, urinary bladder urgency, fatigue, and depression. The neuro–ophthalmological manifestations that are associated with MS are ON, diplopia, and nystagmus (4). ON is the most common and may be the first ocular manifestation of MS (5). Uveitis is an inflammation of the uveal tract and is rarely observed in MS (2). Diseases of CNS in which uveitis may play a role include sarcoidosis, Behçet's disease, MS, and Vogt–Koyanagi–Harada disease (6). The most widely used classification of uveitis is the one devised by the International Uveitis Study Group (IUSG) in 1987, which is based on the anatomical location of an inflammation. This classification includes anterior uveitis, intermediate uveitis, posterior uveitis, and panuveitis. Panuveitis is the inflammation of all the layers of the uvea (anterios chamber, vitreous, retina, and choroid) (7). In 2008, IUSG designed a simplified, clinical classification system for uveitis on the basis of the etiological criteria. It has the following three main categories: infectious (e.g., bacterial, viral, fungal, and parasitic), noninfectious (e.g., known systemic associations and no known systemic associations), and masquerade (e.g., neoplastic and nonneoplastic) (8). Intermediate uveitis is the most frequent subgroup of uveitis associated with MS. Some large studies have reported the incidence of intermediate uveitis to be 7.8%–35.8% (9). Uveitis in MS is generally bilateral and is commonly observed in female patients (10). The mean age of onset is 40 years (11). The cause of the association of MS and uveitis is unclear because the etiology of both the diseases is unknown. Some authors suggested that both the diseases involve the same type of immune response (12).

Uveitis is the most common cause of macular edema in patients with MS. Fingolimod, an oral sphingosine 1-phosphate receptor modulator that is approved for MS treatment, is also associated with the development of macular edema in patients. The risk of macular edema is in-

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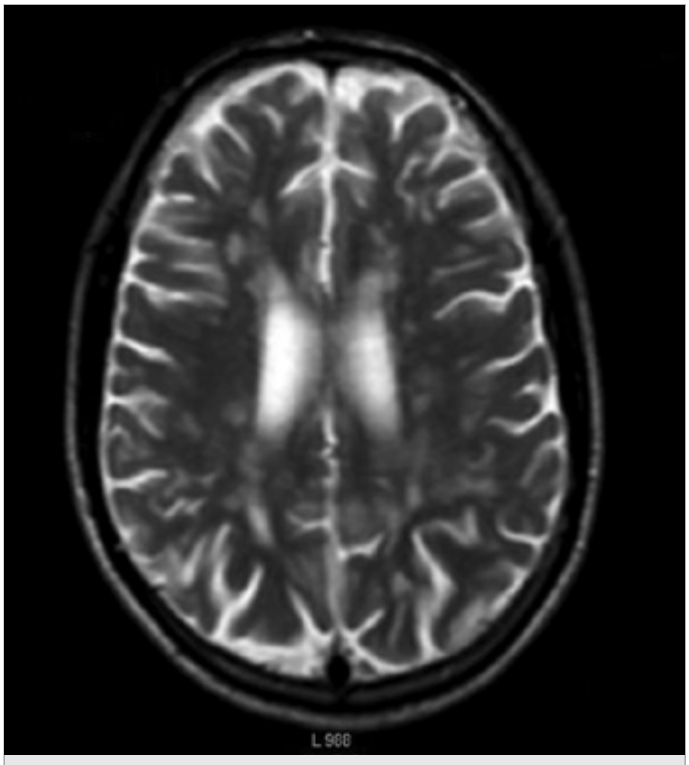

Figure 1. Axial T2-weighted image showing multiple hyperintense foci in the periventricular area, which are consistent with MS plaques

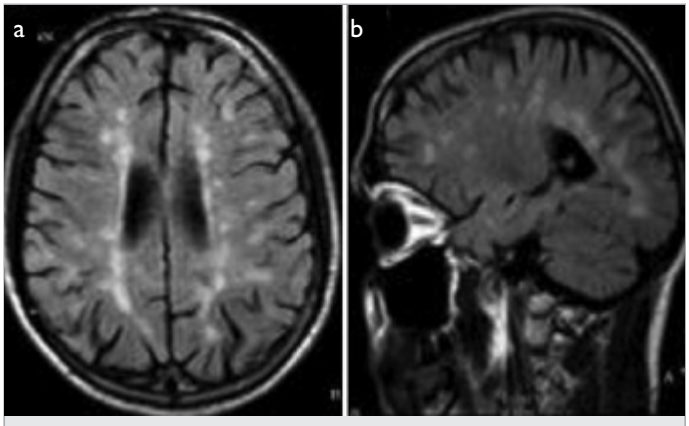

Figure 2. a, b. Axial T2 Fluid-attenuated inversion recovery (FLAIR) image (a) at the level of lateral ventricles showing hyperintense periventricular white lesions suggestive of MS and parasagittal T2 FLAIR image (b) showing multiple, ovoid-shaped hyperintense periventricular white lesions

creased in patients with diabetes mellitus or in patients with a history of uveitis (13). Therefore, an ophthalmological examination should be performed before initiating the fingolimod therapy, and these patients should have regular ophthalmological evaluations during treatment.

Uveitis is rarely observed in MS; however, it is one of the most common causes of blindness. Clinicians are required to consider the possibility of the development of uveitis during MS, and patients presenting with uveitis should be immediately administered appropriate treatment and followed up.

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