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Nataluzimab

A new treatment for multiple sclerosis

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Multiple Sclerosis (MS) is a demielinating disorder that affects more than 1.1 million people worldwide, and women twice as common as men. The age of onset is tipically between 20 and 40 years, and thus this disease has a major impact on society. The current best treatment for MS is interferon beta (and derivates), but this approach has only limited efficacy. Other treatments have been dissapointing: glucorticoids are of limmited value only in acute attacks; mitoxantrone (an antineoplastic agent) has very limited efficacy and its use is being shadowed by severe adverse reaction (cardiac toxicity and acute leukemia); azathioprine, cyclophosphamide, methotrexate and intravenous Ig have also been used with some anectodal beneficial results. ❑

Two recent studies have evaluated the efficacy in the treatment of MS of a new compound, a selective inhibitor of adhesion molecules, called nataluzimab. The AFIRM study included 627 patients with MS, who were randomized 1:1 to receive nataluzimab or placebo, by intravenous route, one dose at every 4 weeks, for two years. The SENTINEL study included 1171 patients with relapsing MS after treatment with interferon beta-1a. The medication was administered in a similar fashion to the AFIRM study. In both studies, the primary objectives were the rate of relapse at 1 year and the rate of the progress of the neurological imparement at 2 years.

In the AFIRM study, nataluzimab lowered the rate of progression of the neurological impairement by 42% at 2 years (95% CI 0.43 – 0.77, p = 0.001). The risk of progression of MS was 17% under active treatment as compared with 29% under placebo. Nataluzimab reduced the rate of relapse at 1 year by 68% as compared with placebo (p = 0.001). Furthermore, nataluzimab was associated with a 92% reduction in the number of cerebral lesions both at 1 year and at 2 years (p=0.001). Fatigue and allergical reactions were the most frequent adverse reactions in the AFIRM trial, where the risk of severe hypersensitivity reactions was 1%.

In patients with relapsing MS under interferon beta-1a, in the SENTINEL study, the adding of nataluzimab over interferon led to a 24% reduction in the rate of progression of the neurological imparement at 2 years (95% CI 0.61-0.96, p = 0.02) and a reduction in the rate of annual relapse (0.34 vs 0.75; p = 0.001). In the nataluzimab group two cases of progressive multifocal leucoencephalopathy (PML) were noted. One of these patients died.

In conclusion, treatment with nataluzimab is effective in the reduction of the rate of progression of the MS, including relapsing forms of MS. However, more studies are needed in order to assess the risk of PML, since two cases of PML were noted in the groups treated with nataluzimab. ❑

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