

Medical Update Memo

September 22, 2009

250 mug or 500 mug interferon beta-1b versus 20 mg glatiramer acetate in relapsing-remitting multiple sclerosis: a prospective, randomised, multicentre study

Summary

Canadian neurologist Dr. Paul O'Connor and colleagues report on a comparative drug trial. The aim of the Betaferon Efficacy Yielding Outcomes of a New Dose (BEYOND) trial was to compare the efficacy, safety, and tolerability of 250 mug or 500 mug interferon beta-1b with glatiramer acetate for treating relapsing-remitting multiple sclerosis. *Lancet Neurol.* 2009 Oct;8(10):889-897. Epub 2009 Sep 2

Details

Both interferon beta and glatiramer acetate are accepted treatments for MS. Both are first line treatments and, despite having completely different mechanisms of action, clinical trials testing these drugs versus placebo have shown very similar results for both types of drug. However, only a few studies have directly compared the efficacy of immunomodulatory drugs. More specifically, no studies have compared interferon beta 1b (IFN β -1b) with glatiramer acetate (GA). For this reason, the authors aimed to compare the efficacy of IFN β -1b at a standard dose (250mug) or double dose (500mug) versus GA.

Between November, 2003, and June, 2005, 2447 patients with relapsing-remitting multiple sclerosis were screened and 2244 patients were enrolled in this prospective, multicentre, randomised trial. Patients were randomly assigned 2:2:1 by block randomisation with regional stratification to receive one of two doses of interferon beta-1b (250 mug or 500 mug) subcutaneously every other day or 20 mg glatiramer acetate subcutaneously every day. The primary outcome was relapse risk, defined as new or recurrent neurological symptoms separated by at least 30 days from the preceding event and that lasted at least 24 h. Secondary outcomes were progression on the expanded disability status scale (EDSS) and change in T1-hypointense lesion volume on MRI.

Flu-like symptoms were more common in patients treated with interferon beta-1b ($p < 0.0001$), whereas injection-site reactions were more common in patients treated with glatiramer acetate ($p = 0.0005$). They found no differences in terms of relapse rate, progression of disability and overall tolerability between the two different treatments or between the two doses of IFN β -1b. The study was funded by Bayer HealthCare Pharmaceuticals.

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