[Intervention Review]

Interferon Beta for Primary Progressive Multiple Sclerosis

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ABSTRACT

Background

Therapeutic trials with ß-interferon in Multiple Sclerosis (MS) have mainly focused on remitting-relapsing multiple sclerosis (RRMS), demonstrating a reduction in relapse rate. However, there is not enough evidence about their efficacy in patients with primary progressive multiple sclerosis (PPMS).

Objectives

Identify and summarize the evidence that ß-interferon is beneficial and safe in patients with PPMS.

Search strategy

We searched (until April 2008) the Cochrane MS Group Trials Register; The Cochrane Central Register of Controlled Trials (CENTRAL) The Cochrane Library, (2008, Issue 3,); MEDLINE (PubMed) (January 1966 to April 2008), EMBASE (January 1974 to April 2008); NICE (January 1999 to April 2008); LILACS (January 1986 to April 2008); Screening of reference lists of all primary studies found; Contact and inquiry of drug manufactures and multiple sclerosis experts.

Selection criteria

Randomized double or single blind, placebo-controlled trials of recombinant ß-interferon in patients with PPMS including trials of MS which report separate outcomes in subgroups of patients with PPMS.

Data collection and analysis

Two reviewers independently extracted and assessed trials' quality according to the criteria outlined in The Cochrane Handbook.

Main results

Of 1280 potential studies evaluated, only two Randomized Control Trials (123 patients) were included. ß-interferon treatment compared to placebo did not show differences regarding the proportion of patients with progression of the disease (RR 0.89, 95% CI 0.55 to1.43), and it was associated with a greater frequency of treatment-related adverse events (RR 1.90, 95% CI 1.45-2.48). One of the trials evaluated the MRI secondary outcome pre-specified in the protocol. This trial showed that at two years the numbers of active lesions on brain MRI scan in ß-interferon arm were significantly lower than in placebo arm (weighted mean difference -1.3, 95% CI -2.15 to