Double-blind study of true vs. sham plasma exchange in patients treated with immunosuppression for acute attacks of multiple sclerosis.

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We enrolled 116 patients in a multicenter, randomized, double-blind controlled trial of an 8-week course of 11 plasma exchange (PE) treatments in exacerbations of MS. The control group received sham PE, and both groups received identical treatment with IM ACTH and oral cyclophosphamide. Serum IgG decreased in the PE and sham treatment groups by 76% versus 22% by treatment 5, and by 64% versus 14% by treatment 11. PE also produced significant reductions in IgA, IgM, C3, and fibrinogen. PE patients had moderately enhanced improvement at 2 weeks relative to the sham group. PE patients with relapsing/remitting disease had significantly enhanced improvement at 4 weeks and there was also an increased improvement at 12 months, although this latter effect disappeared when we analyzed relapsing/remitting patients as a separate subgroup. Life table analysis showed the median time to recover preattack disability status was shorter in PE- than in sham-treated relapsing/remitting patients (4 vs. 13 weeks), a result confirmed by raw disability status scores in which there was recovery to their average preattack disability score by 3 months. PE given with ACTH plus cyclophosphamide enhances recovery from an exacerbation of disease in relapsing/remitting patients, although we observed no clear long-term benefits.

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