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Intravenous immunoglobulin for Guillain-Barré syndrome.

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BACKGROUND: Guillain-Barré syndrome is an acute, paralysing, inflammatory peripheral nerve disease. Intravenous immunoglobulin is beneficial in other autoimmune diseases. **OBJECTIVES:** We aimed to determine the efficacy of intravenous immunoglobulin for treating Guillain-Barré syndrome. **SEARCH STRATEGY:** We searched the Cochrane Neuromuscular Disease Group Trials Register (March 2005), MEDLINE (January 1966 to March 2005) and EMBASE (January 1980 to March 2005) using the terms 'Guillain-Barré syndrome' and 'acute polyradiculoneuritis'. **SELECTION CRITERIA:** We included all randomised and quasi-randomised trials. **DATA COLLECTION AND ANALYSIS:** Two authors independently selected papers, extracted data and assessed quality. **MAIN RESULTS:** Another Cochrane systematic review has shown that plasma exchange significantly hastens recovery. We found six randomised trials comparing intravenous immunoglobulin with plasma exchange. We undertook a meta-analysis of five trials involving 536, mostly adult participants who were unable to walk unaided and had been ill for less than two weeks. Our primary outcome measure was the change in a seven-grade disability scale four weeks after randomisation. The weighted mean difference of this measure was not statistically significant, being only -0.02 (95% confidence interval -0.25 to 0.20) of a disability grade more improvement in the intravenous immunoglobulin than the plasma exchange group. There were no statistically significant differences in other measures. One trial involving 249 participants compared plasma exchange followed by intravenous immunoglobulin with plasma exchange alone. Another involving 37 participants compared immunoabsorption followed by intravenous immunoglobulin with immunoabsorption alone. Neither revealed significant extra benefit from intravenous immunoglobulin. One study with 39 participants showed a trend towards more improvement with high-dose compared with low-dose intravenous immunoglobulin. Another trial with 51 children found no significant difference in outcome when the standard dose was given over two days rather than five days. Three studies including a total of 75 participants suggested that in children intravenous immunoglobulin significantly hastens recovery compared with supportive care. **AUTHORS' CONCLUSIONS:** In adults, there are no adequate comparisons with placebo. Randomised trials in severe disease show that intravenous immunoglobulin started within two weeks from onset hastens recovery as much as plasma exchange, which is known to be more effective than supportive care. Treatment with intravenous immunoglobulin is significantly more likely to be completed than plasma exchange. Giving intravenous immunoglobulin after plasma exchange did not confer significant extra benefit. In children, intravenous immunoglobulin probably hastens recovery compared with supportive care alone. More research is needed in mild disease and in treatment starting more than two weeks after onset of the condition. Dose-ranging studies are also needed.

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