

Corticosteroid and antiviral therapy for Bell's Palsy: A network meta-analysis

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Abstract

Background: Previous meta-analyses of treatments for Bell's palsy are still inconclusive due to different comparators, insufficient data, and lack of power. We therefore conducted a network meta-analysis combining direct and indirect comparisons for assessing efficacy of steroids and antiviral treatment (AVT) at 3 and 6 months.

Method: We searched Medline and EMBASE until September 2010 using PubMed and Elsevier search engines. A network meta-analysis was performed to assess disease recovery using a mixed effects hierarchical model. Goodness of fit of the model was assessed, and the pooled odds ratio (OR) and 95% confidence interval (CI) were estimated.

Results: Six studies (total n = 1805) were eligible and contributed to the network meta-analysis. The pooled ORs for resolution at 3 months were 1.24 (95% CI: 0.79 - 1.94) for Acyclovir plus Prednisolone and 1.02 (95% CI: 0.73 - 1.42) for Valacyclovir plus Prednisolone, versus Prednisolone alone. Either Acyclovir or Valacyclovir singly had significantly lower efficacy than Prednisolone alone, i.e., ORs were 0.44 (95% CI: 0.28 - 0.68) and 0.60 (95% CI: 0.42 - 0.87), respectively. Neither of the antiviral agents was significantly different compared with placebo, with a pooled OR of 1.25 (95% CI: 0.78 - 1.98) for Acyclovir and 0.91 (95% CI: 0.63 - 1.31) for Valacyclovir. Overall, Prednisolone-based treatment increased the chance of recovery 2-fold (95% CI: 1.55 - 2.42) compared to non-Prednisolone-based treatment. To gain 1 extra recovery, 6 and 26 patients need to be treated with Acyclovir and prednisolone compared to placebo and prednisolone alone, respectively.

Conclusion: Our evidence suggests that the current practice of treating Bell's palsy with AVT plus corticosteroid may lead to slightly higher recovery rates compared to treating with prednisone alone but this does not quite reach statistical significance; prednisone remains the best evidence-based treatment.

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