

Amantadine improves markers in hepatitis C

Clinical question Is amantadine effective in the treatment of hepatitis C in patients who are not benefiting from interferon therapy or who are not candidates for interferon?

Bottom line Amantadine reduces biochemical markers in patients with hepatitis C, but it has little effect on symptoms or quality of life in patients for whom interferon was ineffective or not tolerated.

Synopsis This study enrolled 152 patients (including seven children) with confirmed hepatitis C, abnormal liver enzyme levels, hepatitis C RNA in the blood and abnormal liver histology, in whom interferon was not effective, tolerated or indicated. Patients were randomised (allocation may not have been concealed) using a complex scheme that balanced the two groups by all the characteristics. They received either the antiviral amantadine 100mg twice daily for 12 months or placebo for six months followed by the same amantadine dose for an additional six months (children were given a lower dose). After six months, serum alanine aminotransferase (ALT) dropped from an average 106 U/L to 77.5 U/L ($P = 0.08$), with 25 per cent of treated patients achieving normal ALT levels. There was no change in the placebo-treated patients; however, these patients had a similar

decrease when switched to amantadine after six months. With regard to virological response, RNA levels were negative in 9 per cent of patients after six months of therapy; that percentage increased to 11 per cent after 12 months, but remained negative in only 7 per cent six months following discontinuation of amantadine. Unfortunately, symptom surveys were not affected by therapy. Quality of life was not affected either, except, for some odd (and perhaps statistically anomalous) reason, on the social scale, for patients taking amantadine for 12 months instead of six months ($P = 0.02$). Interestingly, despite the common intolerance of amantadine at this dose, almost every patient (92 per cent) completed the study.

Level of evidence 1b (individual randomised controlled trial with narrow confidence interval)

Reference Smith JP, Riley TR, Devenyi A, et al. Amantadine therapy for chronic hepatitis C. A randomized double-blind placebo-controlled trial. *Journal of General Internal Medicine* 2004;19:662-68.

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