Efficacy of Amantadine Treatment on Symptoms and Neurocognitive Performance Among Adolescents Following Sports-Related Concussion.

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Source

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Abstract

OBJECTIVE:: To evaluate the efficacy of amantadine in the treatment of symptoms and neurocognitive performance in adolescents following sports-related concussion.

PARTICIPANTS:: A clinical sample of 25 male (n = 11) and female (n = 14) adolescent subjects with an age-, sex-, and concussion history-matched group of 25 male (n = 11) and female (n = 14) control subjects.

SETTING:: Outpatient concussion clinic.

INTERVENTION:: Retrospective, case-control design. Treatment group consisted of patients treated with 100 mg of amantadine twice daily (200 mg total per day) following a period of rest. Matched controls were evaluated and treated conservatively without medication at the same concussion program prior to the start of the current amantadine protocol.

MAIN OUTCOME MEASURES:: Immediate Postconcussion Assessment and Cognitive Test computerized neurocognitive test battery and symptom report.

RESULTS:: Results support significantly greater improvements from pre- to posttest in reported symptoms, verbal memory, and reaction time performance for the amantadine group than the matched controls. There were no significant differences for visual memory or visual motor processing speed.

CONCLUSION:: This study provides empirical support for amantadine as an effective pharmacologic treatment of certain concussion-related cognitive deficits and symptoms in athletes with protracted recovery of more than 3 weeks.