
Methylphenidate treatment of attention deficit hyperactivity disorder in young people with learning disability and difficult-to-treat epilepsy: Evidence of clinical benefit

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Purpose

To establish the efficacy and safety of methylphenidate (MPH) treatment for attention deficit hyperactivity disorder (ADHD) in a group of children and young people with learning disability and severe epilepsy.

Methods

This retrospective study systematically reviewed the case notes of all patients treated with methylphenidate (MPH) for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) ADHD at a specialist epilepsy center between 1998 and 2005. Treatment efficacy was ascertained using clinical global

impressions (CGI) scores, and safety was indexed by instances of >25% increase in monthly seizure count within 3 months of starting MPH.

Key Findings

Eighteen (18) patients were identified with refractory epilepsies (14 generalized, 4 focal), IQ <70, and ADHD. Male patients predominated (13:5) and ADHD was diagnosed at a median age of 11.5 years (range 6–18 years). With use of a combination of a behavioral management program and MPH 0.3–1 mg/kg/day, ADHD symptoms improved in 61% of patients (11/18; type A intraclass correlation coefficient of CGI 0.85, 95% confidence interval [CI] 0.69–0.94). Daily MPH dose, epilepsy variables, and psychiatric comorbidity did not relate to treatment response across the sample. MPH adverse effects led to treatment cessation in three patients (dysphoria in two, anxiety in one). There was no statistical evidence for a deterioration of seizure control in this group with the use of MPH.

Significance

Methylphenidate with behavioral management was associated with benefit in the management of ADHD in more than half of a group of children with severe epilepsy and additional cognitive impairments. Eighteen percent had significant side effects but no attributable increase in seizures. Methylphenidate is useful in this group and is likely to be under employed.

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