A Review of OROS Methylphenidate (Concerta®) in the Treatment of Attention-Deficit/Hyperactivity Disorder.

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Abstract

Attention-deficit/hyperactivity disorder (ADHD) is a common neurobehavioural disorder with onset during childhood. It affects a child's development, both at home and at school, and impacts on social, emotional and cognitive functioning, in both the home and the school environment. Untreated ADHD is very often associated with poor academic achievement, low occupational status, increased risk of substance abuse and delinquency. Current practice guidelines recommend a multimodal approach in the treatment of ADHD, which includes educational, behavioural and mental health interventions, and pharmacological management. Stimulant medications, including methylphenidate (MPH) and amphetamine products, are recommended as first-line pharmacotherapy in the treatment of ADHD. The choice of stimulant is influenced by several factors; the most influential factor is the duration of action. Long-acting medication provides benefits long after school and work. It also increases the likelihood of once-daily dosing, thereby eliminating the need for mid-day dosing, making the treatment more private, avoiding stigma and improving adherence to medication. MPH is the most widely used psychotropic medication in child psychiatry. It was first developed for use in children as an oral, immediate-release formulation and more recently as various extended-release formulations. These latter formulations include the 12 h preparation Concerta® (osmotic-release oral system [OROS] MPH), which utilizes an osmotic pump system, designed to overcome the difficulties of multiple daily dosing. Since it received approval from the US Food and Drug Administration in August 2000, OROS MPH has been quickly and widely accepted as one of the preferred treatments for ADHD because of its once-daily dosing. This paper reviews the data in support of long-acting OROS MPH in children, adolescents and adults, both in ADHD and in association with its comorbidities.