Effects of methylphenidate on body index and physical fitness in Korean children with attention deficit hyperactivity disorder.

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Abstract

OBJECTIVE:
The side effects of methylphenidate (MPH) on growth remain a controversial concern. This study aimed to investigate the effect of MPH on clinical symptoms, growth, and physical fitness in Korean children.

METHODS:
Fifty male children with attention deficit hyperactivity disorder (ADHD) treated with methylphenidate (MPH-ADHD), 69 MPH-naïve male children with ADHD (Naïve-ADHD), and 60 age-matched and sex-matched healthy control subjects were recruited. Intelligence quotient (IQ), clinical symptoms of ADHD, body index (height, weight, and body mass index [BMI]), and physical fitness (muscular strength, endurance, flexibility, agility, speed, and balance) were assessed.

RESULTS:
Total IQ and performance IQ scores were significantly different among the three groups, as were mean Korean Attention Deficit Hyperactivity Disorder (K-ARS)-total, K-ARS-inattention, and K-ARS-hyperactivity scores. There was no significant difference in height, weight, or BMI among the three groups. There were significant differences in skill-related fitness scores for balance (healthy controls > MPH-ADHD > Naïve-ADHD) and agility shuttle test time (healthy controls < MPH-ADHD < Naïve-ADHD).

CONCLUSIONS:
Our findings support the effectiveness of MPH treatment for improving IQ, attention, and balance and agility measures of skill-related fitness in Korean children with ADHD. MPH was not associated with growth delays in height, weight, and BMI.