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Treatment of refractory obesity in severely obese adults following management of newly diagnosed attention deficit hyperactivity disorder

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Abstract

Objective: To determine whether attention deficit hyperactivity disorder (ADHD) pharmacological treatment of severely obese subjects with newly diagnosed ADHD would result in sustained weight loss.

Design: Longitudinal clinical intervention study of the effects of ADHD medication on weight change over 466 days.

Subjects: 78 subjects (6 male, 72 female, mean age 41.3 years, BMI 42.7 kg m^{-2}) out of 242 consecutively referred severely obese, weight loss refractory individuals were diagnosed as having ADHD. Sixty-five subjects received treatment and 13 remained as controls.

Methods: Standard screening tests identified subjects likely to have ADHD. A diagnosis was made in 78 subjects by semi-structured clinical interview. ADHD subjects were screened for comorbid conditions (binge eating disorder, mood disorder, sleep apnea, chronic pain, gastroesophageal reflux disease). Satisfactory resolution of symptoms of comorbid conditions was achieved prior to the introduction of pharmacotherapy for ADHD. Subjects not accepting, tolerating or remaining on ADHD medication served as controls. Weight was measured at sequential clinic visits after initiation of pharmacotherapy.

Results: Comorbid conditions were found to be highly prevalent (sleep apnea 56.4%, binge eating disorder 65.4%, mood disorder 88.4%). After an average of 466 days (s.d.=260) of continuous ADHD pharmacotherapy, weight change in treated subjects was -12.36% of initial weight and in controls +2.78%, $P<0.001$. Weight loss in treated subjects was 15.05 kg (10.35%) and weight gain 3.26 kg (7.03%) in controls, $P<0.001$.

Conclusions: ADHD is a highly prevalent condition in the severely obese population. Treatment of ADHD is associated with significant long-term weight loss in individuals with a lengthy history of weight loss failure. This result is likely because of the positive effects of treatment on self-directedness, persistence and novelty-seeking behaviors. ADHD should be considered as a primary cause of weight loss failure in the obese. Individuals seeking medical or surgical weight loss should be evaluated for ADHD and treated appropriately before intervention. This may improve the outcome for medically managed patients and avoid complications in surgical subjects because of poor compliance with diet and supplement requirements.

Keywords: attention deficit hyperactivity disorder, weight loss, refractory obesity, psychostimulants

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