The effects of psychostimulants on oral health and saliva in children with attention deficit hyperactivity disorder: A case-control study

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Abstract

INTRODUCTION:
This study investigated the dental health problems and saliva characteristics of children under psychostimulant therapy for attention-deficit hyperactivity disorder (ADHD).

MATERIALS AND METHODS:
One hundred and twenty children aged 7-12 years were divided into three groups. Groups 1-2 comprised children diagnosed with ADHD: those who had not yet started psychostimulant therapy (Group 1) and those already receiving long-term psychostimulant therapy (Group 2). Group 3 comprised healthy, nonmedicated children. Possible side effects of psychostimulants were investigated at the beginning of study in Group 2 and after 3 months drug use in Group 1. Bruxism and dental erosion prevalence, salivary Streptococcus mutans count, buffering capacity, and stimulated salivary flow rate (SSFR) were measured, and salivary α-amylase, calcium, total protein, and proline-rich acidic protein (PRAP) levels were quantified in the beginning of the study. Data were analyzed using the Kruskal-Wallis test.

RESULTS:
The most frequently reported side effects of psychostimulants were decreased appetite, dry mouth, and increased fluid consumption. The prevalence of bruxism and dental erosion was higher in Groups 1 and 2 than in Group 3, but the differences were not significant (P > 0.05). In Group 2, subjective dry mouth feel was reported by 32.5% of patients and 17.5% had a very low SSFR. Salivary α-amylase, calcium, total protein, and PRAP levels were lower in Group 2 than the others, but the differences were not significant (P > 0.05).

CONCLUSIONS:
ADHD and psychostimulant therapy do not appear to be significantly related to decreasing SSFR or protective saliva components against dental caries. However, a systematic investigation of the long-term safety of psychostimulants is needed. The most effective method of maintaining dental health of children with ADHD is frequent appointments focusing on oral hygiene practices accompanied by dietary analyses.