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Can Orthodontic Retainers Cause Carious Lesions?

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Development of carious lesions along lower fixed retainer wire placed after orthodontic treatment was investigated clinically and radiographically. Seventy participants contributed and divided into forty experimental participants (20 males and 20 females with a mean age of 23.4 and 24.4 years, respectively) bonded with lower fixed retainer extended from right to left canine for a period ranging from one to six years. While the remaining thirty were control participants (15 males with a mean age of 24.6 years, and 15 females' mean age were 26.8 years). All participants were examined clinically and radiographically. Examiners filled a questionnaire concerning patient's oral hygiene, dietary habits, and frequency of fixed retainer detachment in the experimental group.

Out of the 240 bonded teeth that had been examined clinically and radiographically, only seventeen teeth had shown carious lesions. Both targeted groups showed insignificant caries incidence ($P > 0.05$). Comparison of both genders indicated that males had three times higher caries incidence than females but with insignificant difference ($P > 0.05$) in the experimental group. Central and lateral incisors showed higher carious frequency (37.5%) than canines (25%), and 20 % of the experimental group experienced retainer detachment. Surprisingly, the experimental group showed better significant difference ($P < 0.05$) than control group regarding oral hygiene status, with 61.8 % and 20.0 %, respectively. Additionally, both groups showed slight significant difference concerning frequency of scaling and prophylactic measures. Our findings showed no apparent damage and low carious risk to the teeth bonded with fixed retainer.

Biography:

Hana Omar Albalbeesi has completed her M.Sc. Degree from Dental College, King Saud University, Saudi Arabia. She is a consultant of Orthodontics, in the Department for Pedodontics and Orthodontic Dentistry. She was a Director of the Dental Assisting Diploma Program (DADP) for 4 years, shehas many published papers concerning growth assessment, teeth impaction and diagnosis of different orthodontic problems, and she is involved in teaching of undergraduate students and oftenly Postgraduate students.