Reaching the Texas Dental Goals of Healthy People 2010

Bill Devine, D.M.D., JPS Health Network

Introduction

Tooth decay is the most common chronic disease of American children, causing unnecessary pain, avoidable facial disfigurement, and rarely and tragically, life-threatening infections (1). In the U.S., 25 percent of children and adolescents, typically those from families with low incomes and from minority groups, experience 80 percent of all dental decay.

Abstract

Background. The U.S. Department of Health and Human Services has promoted Healthy People 2010, which is a set of national health objectives for the nation to achieve over the first decade of the new century (1). Texas has not yet met its target of 50 percent of 8-year-old children with dental sealants having been placed on their 6-year molars, which is one of the Healthy People 2010 goals.

An assessment of the dental needs of children in Tarrant County, Texas, was initiated by the JPS Health Network (named after John Peter Smith). The JPS Health Network established the Healthy Smiles program to address the dental needs of the students in this county because a school-based dental sealant program would be effective in reducing dental decay.

Methods. Approved Title One elementary schools in Tarrant County were scheduled for dental screenings, education, and fluoride and dental sealant applications. Students were given visual dental screenings and classified as to future dental needs. First grade students received fluoride varnish and second and third grade students received fluoride and dental sealants.

Results. For the 2010-2011 school year: A total of 28,322 students were seen by dental professionals from the JPS Health Network; 8,348 dental sealants were placed; and 11,825 fluoride applications were given by dental staff.

Conclusions. The JPS Health Network Healthy Smiles Program proved to be an effective way to deliver oral preventive care and dental education to a large number of low-income students.

Clinical Implications. Dental caries prevention programs such as Healthy Smiles could help Texas reach its goals for improved oral health for the children of Texas.

KEY WORDS: Oral preventive care; school-based dental sealant/fluoride program; target prevention.

Shear Bond Strengths of a Selenium Containing and a Conventional Light Cured Adhesive for Orthodontic Bonding


Abstract

BACKGROUND: The objectives of this study were to evaluate the debonding strength and mode of failure of a selenium containing adhesive compared to an established orthodontic adhesive.

MATERIALS AND METHODS: One hundred sixty bovine mandibular incisors were allocated to eight groups: steel and clear brackets were bonded with either selenium containing adhesive (Group 1: SeLect Defense©) or a conventional light-cured adhesive (Group 2: Transbond XT©) to measure debond strength and the adhesive remnant index was used to assess the location of bond failure. Data was evaluated using a three-way analysis of variance and Fisher’s PLSD multiple comparisons test for mean debond strengths.

RESULTS: Group 2 debond strengths were greater than that of Group 1 with the steel and clear brackets. Group 1 debond strengths were greater with clear than with steel brackets at both time points. Both adhesives demonstrated increased debond strengths from zero to 24 hours and the clear brackets exhibited a greater ARI than steel after debonding. Comparisons of debond strength means among adhesives, brackets, and times were all statistically significant.

CONCLUSIONS/DISCUSSION: All debond strengths were within a clinically acceptable range according to previous literature. SeLect Defense© may be desirable due to its potential for preventing white spot lesions despite the reduced strength compared to Transbond XT©.

KEY WORDS: Selenium, orthodontic adhesive, bond strength, Transbond XT©, white spot, bracket, SeLect Defense©