

Cone Beam Computed Tomography in the Diagnosis of Dental Disease

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Periapical, bitewing, occlusal, and panoramic radiographs are used in everyday dental practice to provide valuable diagnostic information in dental disease diagnosis. However, these radiographic projections offer a 2-D representation of 3-D anatomic structures with resultant structure superimposition and unpredictable distortion. This major limitation obscures anatomic conspicuity and poses difficulties in radiographic interpretation during caries, periodontal, oral surgery, and endodontic applications.

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Abstract

Conventional radiographs provide important information for dental disease diagnosis. However, they represent 2-D images of 3-D objects with significant structure superimposition and unpredictable magnification. Cone beam computed tomography, however, allows true 3-D visualization of the dentoalveolar structures, avoiding major limitations of conventional radiographs. Cone beam computed tomography images offer great advantages in disease detection for selected patients. The authors discuss cone beam computed tomography applications in dental disease diagnosis, reviewing the pertinent literature when available.

KEY WORDS:

cone beam computed tomography, tooth diseases, diagnosis

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An Access to Care Study for the Pre-surgical Nasoalveolar Molding and Other Treatments for Cleft Lip and Palate

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Introduction

Cleft lip and palate is the second most common birth defect to clubfoot occurring in 1:700 live births (5,8,14). Different methods for pre-surgical interventions in cleft lip and palate patients have been studied since the 1950's. Some of the earlier interventions included only lip adhesion surgery prior to the complete



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Abstract

Purpose: This study is designed to ascertain whether a regional bias exists, as well as provide a reference to those seeking the various modalities used in pre-surgical intervention for cleft lip and palate either for their own patients or educational purposes.

Methods: A survey was constructed using Survey Monkey and distributed via e-mail to American Academy of Pediatric Dentistry members. Approximately 3,689 surveys were delivered consisting of 12 questions asking whether they provide pre-surgical intervention to cleft lip and palate patients, and what type of interventions they use.

Results: A total of 572 members responded. Of the respondents, 480 reported they treat children affected by cleft lip and/or cleft palate. Of these, only 102 reported that they provide pre-surgical treatment. Pre-surgical nasoalveolar molding (PNAM) represented 29.2 percent of the interventions used and was most heavily concentrated in Texas. Other modalities used included the Latham appliance, lip adhesion/tacking, the passive appliance, and a category 'other' was included. Those checking 'other' most often described alveolar grafting prior to later surgical procedures than were of interest in this study. The University of Texas Health Science Center San Antonio had the largest number of respondents using the PNAM.

Conclusions: A very small proportion of pediatric dentists are providing pre-surgical intervention of any kind to patients with cleft lip and palate. However, those that are providing the service are spread around the country enough to consider PNAM as the standard of care for pre-surgical infant cleft treatment.

KEY WORDS:

Pre-surgical nasoalveolar molding, cleft palate, cleft lip

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Hispanics with Disabilities in Texas Congressional Districts

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Introduction

The Census Bureau report on the 2010 Census indicated that there were more than 54 million U.S. residents (16.3 percent of the population) of Hispanic-origin. Forty-seven percent of this population lived in California or Texas (1). Federal agencies detailed that in 2006 disability associated health care expenditures (\$397.8 billion) accounted for 26.7 percent of all health care expenditures for adults in the U.S., ranging from \$598 million in Wyoming to \$40.1 billion in New York. In Texas, \$24 billion was associated with health care expenditures for 2,782,000 individuals with disabilities (including 859,800 Hispanics with disabilities) (2-5).



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Abstract

It is difficult to comprehend the difficulties faced by individuals with special needs and their families when they are couched in “mega numbers.” These complications are magnified further in considering the burgeoning Hispanic population with disabilities in Texas. The need is to somehow “personalize” these numbers if we are to bring increased attention to these individuals with special needs. To this end, Census Bureau data at the Congressional District level were used to illustrate an approach to personalize the information for community residents and health practitioners.

KEY WORDS:

Hispanic Americans, disabled persons, Texas

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