Restorative Dentistry for the Pediatric Patient
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Introduction

In April, 2002, the American Academy of Pediatric Dentistry (AAPD) sponsored a Pediatric Restorative Dentistry Consensus Conference (1). The purpose of the conference was to bring together experts in eight recognized areas (risk assessment, sealants, glass ionomer cements, amalgam, dentin/enamel adhesives, resin-based composites, stainless steel crowns, and anterior restorations) to provide literature reviews to aid in the development of evidence-based, scientifically supported position papers supporting pediatric restorative techniques and approaches.

The purpose of this paper is to revisit those findings and recommendations in terms of current pediatric restorative techniques.

Abstract

The American Academy of Pediatric Dentistry sponsored the Pediatric Restorative Dentistry Consensus Conference in 2002. This paper will review the consensus statements that were issued as a result of the conference. Since the conference there have been advances in procedures, materials, and techniques that need to be considered in terms of some of the consensus statements. The introduction of the First Dental Home, interim therapeutic restoration and nanotechnology are examples of some of the materials and techniques that are now part of everyday pediatric dentistry. This paper will discuss the updates as it relates to each of the 2002 consensus statements.

KEY WORDS: Pediatric, restorative dentistry, risk assessment, sealants, amalgam, resin-based composite, glass ionomer cement, stainless steel crowns, bonding adhesives

Indirect Pulp Therapy: An Alternative to Pulpotomy in Primary Teeth

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Abstract

Preservation of the primary teeth until their normal exfoliation is essential for normal oral function and facial growth of the child. To that end, treatment of primary teeth with large carious lesions approximating the pulp should be aimed at preserving the tooth. Currently, the pulpotomy is the most frequently used pulp treatment for cariously involved primary teeth. The purpose of this manuscript is to describe the use of an alternative to the pulpotomy, indirect pulp therapy (IPT), for the treatment of vital, primary teeth with carious involvement approaching the pulp. Accurate diagnosis of the vitality status of the pulp is critical to the success of IPT and involves careful radiographic and clinical assessment of the teeth to be sure they are healthy or at worst, reversibly inflamed. The indications for IPT are the same as for pulpotomy. The technique involves one appointment, requires that some carious dentin be left to avoid pulp exposure and requires the placement of a biologically sealing base and sealing final restoration. Teeth treated with IPT have success rates at least as good as those treated with pulpotomies, and IPT offers an acceptable alternative to pulpotomy as a treatment for vital, asymptomatic, cariously involved primary teeth.

KEY WORDS: Indirect pulp therapy, primary teeth, pulp therapy

Infant Oral Exam and First Dental Home

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Introduction

Early Childhood Caries (ECC), also known as ‘baby bottle caries’ or ‘nursing bottle decay’ is a severe form of childhood dental caries that is chronic, rampant and infectious in young children under 6, most commonly seen in poor and minority populations (1, 2). ECC (Figure 1) is defined as “the presence of one or more decayed (non-cavitated or cavitated lesions), missing (due to caries) or filled tooth surfaces in any primary tooth in a preschool-age child between birth and 71 months of age (3).” ECC usually affects maxillary primary incisors but when severe, can progress to involve primary molars and cuspids. ECC, like caries has a multi-factorial etiology but its high prevalence in poor minority children is attributed to improper feeding practices, familial socioeconomic background, lack of parental education and dental knowledge, and lack of access to dental care (1). ECC is a disease that, when severe, can affect growth, cause pain and infection and have lasting detrimental effects on the quality of life of patients and parents. Even though ECC is preventable through parental education, early and regular checkups, topical fluoride treatments, appropriate diet control and proper oral hygiene practices, it is still the most common chronic childhood disease in America. The prevalence of ECC is alarming — 40 percent of children are affected by the time they reach kindergarten; 70 percent of these carious lesions are found in approximately 20 percent of our nation’s children (4). Approximately, 51 million school hours are lost due to dental-related illness (5, 6).

Abstract

The purpose of this article is to familiarize general practitioners with the components of a dental home including an infant oral exam, and to the First Dental Home initiative, which is unique to the State of Texas. This article encourages the general practitioners to actively participate in providing care for young children under the age of 3. Components of an infant oral examination are described here with emphasis on knee-to-knee or lap exam, caries risk assessment, preventive treatment, age-appropriate anticipatory guidance, and parent education. The First Dental Home is uniquely designed to help pediatric clients 6 months through 35 months of age to establish a dental home. The objectives, goal and components of FDH are discussed in detail.

KEY WORDS: dental home, Texas Health Steps, knee-to-knee exam, prevention, early childhood caries

Comprehensive Oral Rehabilitation with General Anesthesia and Prosthetic Care in the Primary Dentition: A Case Report


Abstract

This case report describes the oral rehabilitation of a 5-year-old male referred by a general dentist to a pediatric dentist due to acute psychological stress to dental treatment and extensive dental caries. The patient’s dental restorations and extractions were completed under general anesthesia. Maxillary and mandibular prostheses were completed in the outpatient clinical setting. The treatment plan for this child provided options to improve appearance, self-image and oral function.

KEY WORDS: General anesthesia, pediatric, primary dentition, removable prosthesis


Introduction

Pediatric dentists seldom consider removable prosthesis in children after loss of multiple primary teeth due to dental caries or trauma because it is often thought unrealistic to expect a child to be compliant with this type of treatment (1). However, it is important to consider not only esthetics but also the psychological and emotional development of the child as an individual (2, 3). General anesthesia is one of the many procedures that pediatric dentists use to treat patients with extensive dental caries associated with psychological or emotional maturity or physical or mental disabilities where there is no expectation of behavior improvement over time (4, 5).

The following case report describes the prosthetic rehabilitation of a 5-year-old male whose pre-treatment behavior might have discouraged a practitioner from considering a removable prosthesis. However, not only was the patient compliant with treatment, he was very happy with the results.