



Research Paper

Treatment After Illness of Early Childhood Caries - Clinical Case Report

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ABSTRACT

Background: Children with “atypical”, “progressive”, or “rampant” patterns of dental caries (described separately for each age group): < 3 years: any sign of dental caries in smooth surfaces 3–5 years: one or more cavitated, missing (due to caries), or filled smooth surfaces in maxillary teeth or a dmfs score of 4, 5, and 6 surfaces for ages 3, 4, and 5 years.

Case Report: A child, a girl of 3 years complains of severe periodic toothache 61 was brought by his parents for examination and treatment at the University Medical Dental Center of the Faculty of Dental Medicine, Varna, Bulgaria. The patient has suffered of early childhood caries stage II. The child not systemic medical condition.. It is directed for pediatric dentistry treatment by a pediatrician from the Varna. The treatment was conducted on local anesthesia with the clinic of the University Medical Dental Center at the Faculty of Dental Medicine, Varna.

Conclusions: 1. Secondary prophylaxis should begin as early as possible after childbirth or about 4-6 months after delivery. 2. Children who have suffered from ECC should be treated by minimally invasive cavity preparation with preventive fillings for temporary teeth. 3. The restorations for temporary teeth are made of modern fluoride-emitting adhesives as compomers. If resin-modified GIC(Cements) are applied, it is necessary to observe the filling made to the physiological breakdown of the permanent tooth and the extraction of the temporary tooth.

Keywords: ECC, cavitated lesions, local anesthesia, invasive treatment

I. INTRODUCTION

According to Acs G, Shulman R, Ng MW, Chussid S children with “atypical”, “progressive”, or “rampant” patterns of dental caries (described separately for each age group): < 3 years: any sign of dental caries in smooth surfaces 3–5 years: one or more cavitated, missing (due to caries), or filled smooth surfaces in maxillary teeth or a dmfs score of 4, 5, and 6 surfaces for ages 3, 4, and 5 years [1,5].

At 1 year of age some children already have developed caries lesions and at 3 years of age about 30% have caries (noncavitated caries lesions included). The first sign of dental caries in infants with ECC is the appearance of white demineralized areas on the cervical part of the buccal or lingual surfaces of the maxillary anterior teeth, while the mandibular incisors usually remain unaffected. The most frequently affected surfaces in older preschool children are the occlusal surfaces of the second primary molars and the distal surfaces of the first primary molars [1,2,3].

II. CASE REPORT

A child, a girl of 3 years and 6 months complains of severe periodic toothache 61 was brought by his parents for examination and treatment at the University Medical Dental Center of the Faculty of Dental Medicine, Varna, Bulgaria. The patient has suffered of early childhood caries stage II. The child not systemic medical condition. It is directed for pediatric dentistry treatment by a pediatrician from the Varna. The treatment was conducted on local anesthesia of the child in the clinic of the University Medical Dental Center at the Faculty of Dental Medicine, Varna.

Caries status

Methodology: A dental status is assessed and registered by the WHO criteria.

Units of observation: deciduous teeth and surfaces with/without carious lesions, active carious lesions at the level of a diagnostic threshold level d1a.

○ Diagnostic Scale – codes:

d1a - white enamel lesions visible with drying

d1b - white enamel lesions visible without drying

d2 - white enamel cavitated lesion

d3 - dentin lesion without affecting the pulp

d4 - dentin lesion with affecting the pulp

A - active (d1b, d2)

NA - inactive (d1b, d2)

Reversible carious lesions - (d1a, d1b, d2)

Irreversible carious lesions - d3 and d4

Reversible carious lesions - (d1a, d1b, d2). Irreversible carious lesions - d3 and d4. We found out from the review the presence of caries lesions d3 of the teeth 51,52,54, 61,62,64, Figures 1 and 2. After placement of local anesthesia for each of the treated teeth with a local anesthetic without corigens, we switched to surgical treatment of caries teeth. Cavities affected by caries were treated with minimally invasive preparation techniques. After disinfection treatment, were filled with a compomer/Dyract^R XP/. On the non-carious pit and fissures for teeth 54 and 64 and wells we placed a sealants to achieve preventive fillings techniques and results Figure 3.

All healthy enamel surfaces have been prophylaxed with Mineralizing Varnish Clinpro White Varnish with TCP (3M). Preventive and non-surgical treatment for the remaining teeth and temporal dentures in this case is mandatory. Applications with varnish are at the beginning of treatment, and replications every 3 months - for a period of one year. In the clinical study to measure the healing effect of Clinpro White Varnish with TCP for 12 months with DIAGNOdent Pen. Child are at high risk of caries and regularly visit our clinic every 3 months. The child also has a certain diet regimen with predominance of dairy foods and hard cheeses. Carbohydrate foods are taken only as a dessert to the main three meals during the day. The patient and her parents also passed instructions with clinical training to perform proper oral hygiene. The child launches his or her parent's daily teeth with a paste and a brush designed for his age. Toothpaste contains 500 ppm fluoride, the brush has an artificial hair. Toothbrushing is done daily morning and evening 3 minutes minimum time up to 5 minutes maximum time. Due to the high content of Streptococcus mutant in the saliva, we prescribed the oral mucous membrane and dental surfaces to be wiped with Eludril junior fluid wicked for 14 days.

III. DISCUSSION

In our study, the treatment of early caries begins when the child is 3 years old and the carious process is successfully influenced by the timely rehabilitation of the cavitated caries lesions. After the prevention and treatment, the patient underwent a low risk of developing caries, reducing the risk factors and increasing the safety factors. We improved habits and daily oral hygiene [7,8,9,10]. In one study, children with manifest caries lesions at 3 years of age experienced a mean caries increment of 4.5 tooth surfaces from 3 to 6 years, compared to 0.9 tooth surfaces for children who at the baseline had no manifest caries lesions [3]. There is a strong relationship between caries in early childhood and caries development both in the primary dentition up to 10 years of age and in the permanent dentition up to mid-teenage years. However, the distribution of dental caries among 4 year olds is characterized today by a marked positive skewness, as a small, but constant group up to this age has developed 10 or more dmfs [4,6]. According to Vehkalahti et al. 8% of 5 year olds accounted for 76% of the total number of teeth with current untreated caries in their age group, [Vehkalahti et al,11].

IV. CONCLUSION

1. Secondary prophylaxis should begin as early as possible after childbirth or about 4-6 months after delivery.

2. Children who have suffered from ECC should be treated by minimally invasive cavity preparation with preventive fillings for temporary teeth.
3. The restorations for temporary teeth are made of modern fluoride-emitting adhesives as compomers. If resin-modified GIC(Cements) are applied, it is necessary to observe the filling made to the physiological breakdown of the permanent tooth and the extraction of the temporary tooth.

Figure legend



Figure 1. Intraoral inspection of caries vestibular surfaces d3 of teeth 51,52,61,62



Figure 2. Intraoral inspection of caries occlusal d3 of tooth 54 and of tooth 64. Temporary teeth of the lower jaw are healthy.



Figure 3. Intraoral examination. Completing treatment with fillings with Dyract^R XP

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