

THE INCIDENCE AND THE TREATMENT OF THE INCIPIENT CARIOUS LESIONS THE 6-YEAR MOLAR – CLINICAL ASPECTS

C. GH. BOITOR¹, ANCA FRĂȚILĂ², MARIANA SABAU³, DIANA MÂRZA⁴, ALINA CRISTIAN⁵, LOREDANA TĂTARU⁶, OVIDIU BOITOR⁷

^{1,2,3,4,5,6,7} "Lucian Blaga" University of Sibiu

Keywords: 6-year molar, the incidence of the carious lesions, morpho-functional

Abstract: The article presents a statistic study performed on a lot of 102 patients, with ages between 8 and 12 years, which had appeared in our specialized ambulatory of the clinical Hospital Sibiu in the period 2009-2011. The study reflects the incidence and treatment of the incipient carious lesions at the 6-year molar erupted on the arch for 4-6 years. In a study we found that: 15% of those examined had all molars of 6 years decayed, 40% had three decayed molars, 27% had two molars decayed and only 18% one decayed molar. We performed the treatments morphologically and functionally to restore the affected teeth.

Cuvinte cheie: molarii de șase ani, incidența cariei dentare, reconstituiri morfo-funcționale

Rezumat: Articolul prezintă un studiu statistic efectuat pe un lot de 102 pacienți cu vârste cuprinse între 8 și 12 ani care s-au prezentat în ambulatoriul clinic de specialitate al Spitalului Clinic Județean Sibiu în perioada 2009-2011. Studiul relevă incidența și tratamentul cariei dentare simple la nivelul molarilor de șase ani erupți pe arcade relativ recent în urmă cu 4-6 ani. În urma studiului efectuat am constatat următoarele: 15% din cei examinați prezentau toți molarii de 6 ani cariați, 40% prezentau trei molari cariați, 27% prezentau doi molari cariați și doar 18% un singur molar cariat. Prin tratamentele efectuate am urmărit restabilirea morfologică și funcțională a dinților afectați

INTRODUCTION

The occlusal morphology of the 6th-year molar- with deep ditches and fissures- but also the low addressability of the children to a dentist immediately post-eruptive for initializing properly profilactic measures, lead to the appearance of the carious process. The importance of maintenance the coronary integrity of these teeth is primary for a harmonious dento-maxillary development. {2}

The distribution of the carious process at the recent erupted 6-year molars is beginning with the occlusal front and after that evolving in time at the proximal fronts depending on the carioreceptivity and oral hygiene of the child. {3}

The treatment of the incipient carious lesions at the young permanent tooth, represents an emergency and it has to be done in relationship with the destruction degree of the enamel. The coronary restoration will be made after Black's principles of preparing a cavity and with accentuation on resistance and retention of the cavity walls and especially on preventive extension, which determinates the protection of the cavity edges against the secondary carious attack. {1,4}

THE AIM OF THE STUDY

The study reflects the incidence and treatment of the incipient carious lesions at the 6-year molar erupted on the arch for 4-6 years.

MATERIAL AND METHOD

We have realized a statistic study on 102 patients, with ages between 8-12 years, which have had appeared in our specialized ambulatory for dental treatment in the period: January 2009-January 2011. We have prepared a chart and a dental treatment study of each patient, which, besides the personal data, contains also the incidence of incipient carious lesions on recent erupted 6-year molars.

Clinical case no. 1 :

A 9 year old patient presents during the intraoral clinical examination incipient carious lesion on three 6-year molars present on the arch: both lower molars and the upper right molar. The left upper molar was upright, with colormss in the left fissure and on the occlusal front. We have done the coronary restaurating treatment of the molars through root with composit material.

Like it is shown in figure no. 1, the lower, right first molar, presents incipient carious affection on the occlusal and vestibular front.

Figure no. 1. Clinical aspect of an incipient carious lesion on the first lower right molar, recently erupted on the arch



We have had prepared the I.st class and V.th class after Black, after the well known principles and on the floor of the cavity we have had applied a glass-ionomer cement for pulp protection, because the carious process has implied also a part of the dentine, like it is shown in picture no. 2 and no. 3.

¹Corresponding Author: C. Gh. Boitor, 2-4, Hermann Oberth street, Sibiu, 550169, România, e-mail: boitorcornel@yahoo.com; tel: +40 740175420
Article received on 07.04.2011 and accepted for publication in 23.08.2011
ACTA MEDICA TRANSILVANICA December 2011; 2(4)278-280

CLINICAL ASPECTS

Figure no. 2. Clinical steps in the process of preparing bouth cavities



Figure no. 3. The finally aspect of the cavities after putting the cement base

After de condensation of the restaurating, photopolymerizable composite material, we gave functionality to the root, in static and dynamic occlusion of the patient, like it is shown in figure no. 4

Figure no. 4. Functional adaptability of the root

The coronary restauration (picture no. 5) restores morphologic and functional the lower 6-year molar, so that it can be integrated in the stomatognathic system of the patient, through his maintenance on the arch for a long time.

Figure no. 5. Final aspect of the coronary restauration with composit material



Clinical case no.2:

12 year old patient-girl, presents during the clinical intraoral examination, multiple incipient carious lesions at the 6-year upper molars, complicates caries at the lower lest molar and post-extractional space of the lower right molar; it was extracted 4 years ago. (Picture nr.6)

Figure no. 6. : Incipient carious lesion at 6-year upper left molar



At the 6-year upper left molar, we have prepared under anesthetic a cavity on the occlusal front, after Black cavities I.st class, like it is shown in picture nr. 7.

Figure no. 7. The aspect of the cavity at the upper molar



The coronary restauration was realized with composite material, which was occlusal and adapted on the edges. (Picture no.8).

Figure no. 8. Occlusal functional adaptation of the cavity



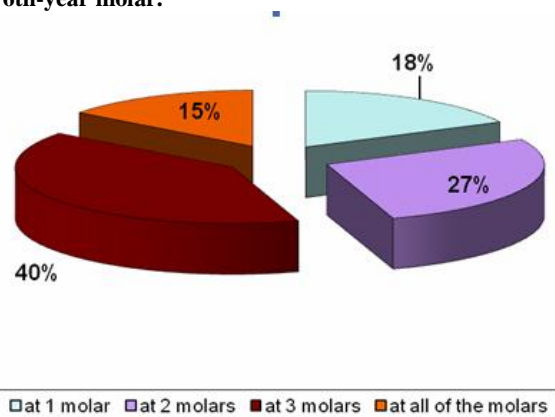
Figure no. 9. Final aspect of the coronary root



RESULTS AND DISCUSSIONS

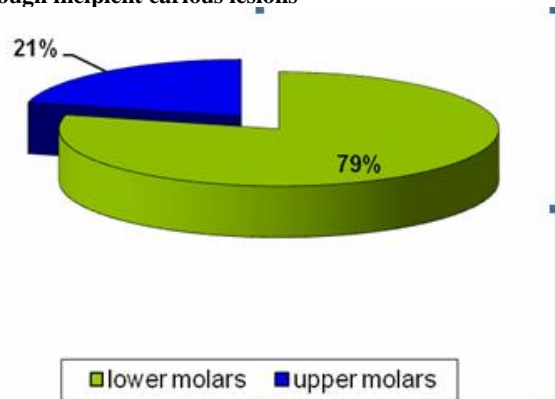
After the statistic analysis of the cases taken in the study, we have observed that the incidence of the incipient carious lesions at the 6-year molars at children between 8 and 12 years is big, like it appears in the graphic no.1: 40% present incipient caries on 3 of the molars, 27% present incipient caries at 2 of the molars, 18% present incipient caries on only one molar and 15% present incipient caries on all of the molars

Figure no. 10. The incidence of the incipient carious lesion at the 6th-year molar.



The majority of the patients (79%) have presented incipient carious lesions at the lower molars, like it is shown in the graphic no.2, fact that is explain by the eruption order of these teeth on the arch - the first the lower molars and after that the upper molars

Figure no. 11. The affection degree of the 6-year molar through incipient carious lesions



CONCLUSIONS

- The incidence of the incipient carious lesion at the recent erupt 6-year molar is extremely high at the age between 8 and 12 years at the patients taken in study.
- The order of eruption on the arch of these molars determinates the appearance of the more frequently incipient carious lesions on the molars of the mandible.
- The treatment of the incipient carious lesions is very complex through coronary restauration with materials which allow the integrity of the tooth in the dental arch and also it's morphological and fuctional occlusion relation.
- The coronary restaurations of the 6-year molars even since childhood has a very important part in the maintenance on the dento-maxillary functions through stopping the evolution of the carious processes.

BIBLIOGRAPHY

1. A. Iliescu, M. Gafar - Cariologie și otodontoterapie restauratoare, Ed. Medicală, București, 2001.
2. Gibson S, Williams S- Dental caries in preschool children: associations with social class, tooth brushing habit and consumption of sugars and sugar-containing foods. Further analysis of data from the National Diet and Nutrition Survey . Caries Res, 1999; 33: 101-13.
3. Laurence J. Platt, Maritza C. Cabezas- Early childhood dental caries, UCLA Center for Healthier Children, Families and Communities, 2000.
4. Zarnea Livia – Pedodontie, Ed. Didactică și Pedagogică București, 1993.
5. Mount G J, Hume WR – Conservarea și restaurarea structurii dentare, Ed. All Educatoinal, București, 1999.