

IMPORTANCE OF THE SIX-YEAR-OLD MOLAR IN PROPHYLACTIC AND CURATIVE DENTAL MEDICINE

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Abstract: This article aims at presenting both the theoretical importance the six-year-old molar has and some of the prophylactic and curative methods in school age children.

Keywords: six-year-old molar, school age children, treatment and prophylaxis

Rezumat: Acest articol își propune să prezinte atât importanța teoretică pe care o are molarul de șase ani, dar și câteva aspecte profilactice și curative la copiii de vârstă școlară.

Cuvinte cheie: molar de șase ani, copii școlari, tratament, profilaxie

WORKING HYPOTHESIS

Dental medicine pays special attention to the six-year-old molar. It is the reference tooth which erupts at the age of six and represents the pivot of the entire set of teeth, the element that structures right or wrong the teeth architecture.

Why is it the most important and studied tooth?

- It is the first permanent successional tooth that occurs at the age of six;
- It has a large susceptibility to tooth decay, mainly due to the rough occlusal relief, with deep grooves and fossulae;
- It is a tooth whose mineralization has started even from the IXth month of intrauterine life and thus, any metabolic disorder or food deficiency of the pregnant woman or of the new born baby has serious repercussions in changing the structure of this tooth;
- Parents usually mistaken it for a milk tooth and although they see it is damaged, they wait to “change” and many times, the child presents a high level of corono-radicular destruction, which often makes it irrecoverable;
- Along with its eruption, the second raise of occlusion takes place;
- It is the only stable element of the mixed dentition, as a result of the early eruption;
- The early loss of this tooth, around the age of 12-13, after the eruption of the second permanent molar, may brought about articular blockings, as a result of the migration of the second molar by tipping. These articular blockings may develop an algodysfunctional syndrome in time.

It was named by Angle, “the arch key of the occlusion”, playing a part in harmonising the occlusion in sagittal and vertical sense.

PURPOSE OF RESEARCH

This article aims at presenting a real and dramatic situation dentists confront with, regarding the six-year-old molar.

Statistic data emphasise the activity of a dental office set up in 1999 in the suburbs of our town and which treats many children coming from low-income families.

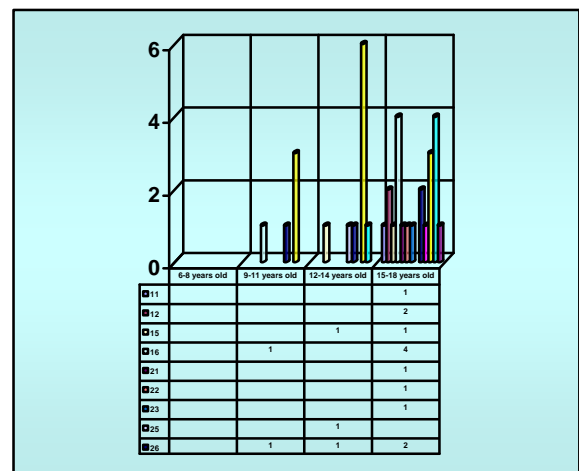
MATERIAL AND METHOD

Between October 2003 and January 2007, 550 children aged between 6 and 18 years old were examined and treated in this dental office.

Out of these, we selected two batches:

The target batch is represented by a number of 75 families coming from poor families and who came to the dental office for consultations and treatment. **The witness batch** is represented by 81 school age children, between 6 and 18 years old, who were treated in the same period of time and who did not have social problems.

Picture no. 1. Distribution of the type of affected teeth on age groups (witness batch)



CLINICAL ASPECTS

RESULTS

✚ The boys and the girls of the age group between 6-8 years old had no affected teeth.

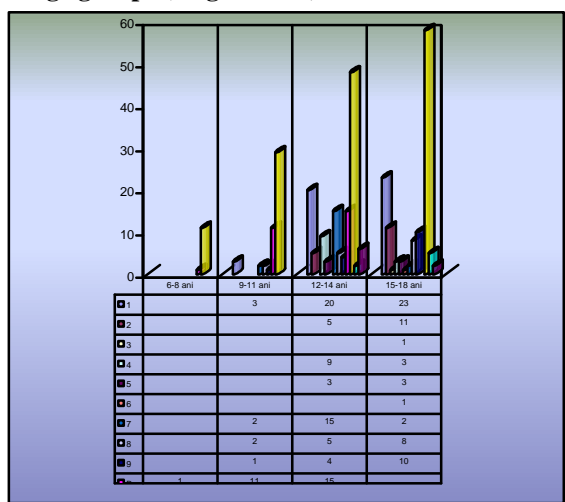
✚ Regarding the age group of 9-11 years old, there were 5 molars affected, out of which 3 were lower front, as against 2 affected six-year-old molars in girls.

✚ Regarding the age group of 12-15 years old, the 3.6 tooth is affected in 6 patients, as against one 4.6 affected. 2 front affected premolars occur in this age group.

✚ Regarding the age group of 12-15 years old, 7 lower affected molars were recorded and just one single front molar.

At the age of 15-18 years old, 4 affected molars have already appeared. *The 1.6 molar is the last affected tooth*, the most affected being 1.6 and 4.6. The front teeth also become affected.

Picture no. 2. Distribution of the type of affected teeth on age groups (target batch)



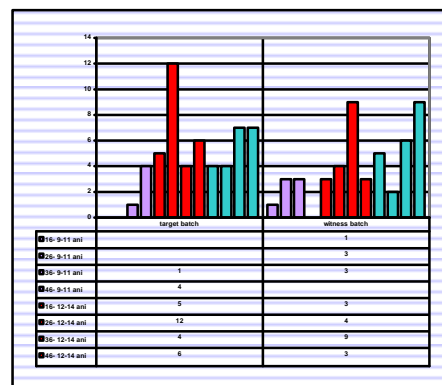
Almost an equal number of therapeutic manoeuvres was performed for the age groups of 12-14 and of 15-18 years old.

✚ The largest number of manoeuvres was performed on the six-year-old molars, simple tooth decays for the age group of 12-14 years old.

✚ Regarding the age group of 15-18 years old, treatments were made both for the six-year-old molars and for the complicated tooth decays or extractions, what implied the higher gravity of lesions in this particular age group.

✚ The patients of this age group came to the dental office late, usually when the frontal teeth became affected; the reason for their showing up was physiognomic disorders in the detriment of the mastication ones.

Picture no. 3. Affection of six-year-old molars, on age groups (batches comparison).



✚ Although the number of treatments made for the six-year-old molars was almost equal – 49 for the target batch and 45 for the witness batch, regarding the target batch, we can notice a “top” in the age group of 12-14 years old for the 2.6 tooth, the upper six-year-old molar, from the left hemiarch.

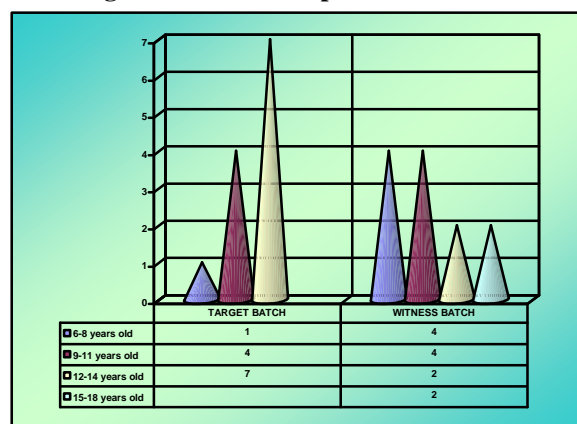
✚ Regarding the witness batch, more treatments on the 3.6 tooth were made for the same age group.

Out of the target batch, more girls of the age group of 12-14 years old came to the dental office, as against the witness batch, where the girls from the age group of 15-18 years old were predominant. Regarding the girls of the target batch, a “top” may be noticed for the age group of 12-14 years old, on the 2.6 tooth (the upper left six-year-old molar).

✚ Regarding the girls of the witness batch, the most affected tooth was the lower right six-year-old molar, but after the age of 15.

✚ These teeth become affected in both batches quite early, 2-3 years after eruption.

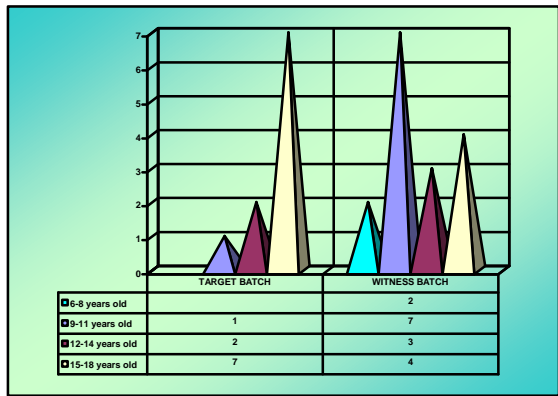
Picture no. 4. Extractions made for the six-year-old molars in girls – batches comparison



✚ More extractions were made for the girls of the target batch, at the age of 12-14, while regarding the age group of 15-18 years old, there was no extraction.

CLINICAL ASPECTS

Picture 5. Complicated treatments made in boys, on age groups – batches comparison



We are interested in the extractions of the definitive teeth taking into account carries complications; that is why we make reference to the age groups of 12-14 years old and 15-18 years old, where we could notice that the extractions of irrecoverable definite teeth, especially of the six-year-old molar, were made in the target batch after the age of 15. The patients came to the dental office late, presenting lesions that could not save their teeth anymore.

CONCLUSIONS AND INTERPRETATIONS

✚ We noticed that, although the number of treatments applied on the six-year-old molars was almost equal, 49 for the target batch and 45 for the witness batch, there was a “top” in the age group of 12-14 years old for the 2.6 tooth, the upper six-year-old molar from the left hemiarch; there were more treatments made for the 3.6 tooth for the same age group in the witness batch.

✚ Unfortunately, the results showed that irrespective of the family environment the children came from, the six-year-old molars affection took place immediately after eruption, that was at the age of 6-8, with an early affection in boys than in girls.

✚ The largest number of manoeuvres was made in the children of the witness batch, of the age group of 15-18 years old, the simple tooth decays treatments were predominant; regarding the same age group, the treatment for complicated lesions predominated in the target batch.

✚ *Regarding the target batch*, in the age group of 15-18 years old, the number of treatments applied for complicated carries on molars is twice higher than the age group of 12-14 years old.

✚ We noticed precocity in the occurrence of lesions in girls, with a more rapid evolution towards massive coronary destructions and with apical periodontitis-type affections, which made the teeth irrecoverable. Puberty could be an explication for the aggravation of lesions more rapidly in girls than in boys; the same precocious aggravations tendencies were also observed in the girls of the witness batch.

✚ Regarding the target batch, the number of extractions at the age of 15-18 is twice higher in comparison with that of the witness batch, this batch

patients came to the dental office only when their teeth could not be saved anymore.

✚ These extractions, seen as radical treatments could have been avoided if the patient had come earlier to the medical office or they could be detected in early stages within the school medical office, what would have meant the recovery and salvation of these teeth. Usually, as a result of the extractions made at this age, after the eruption of the second molars, teeth migrations may occur, especially through version, that is an inclination that may lead to occlusal disequilibrium and, afterwards to the aglodyfunctional syndrome.

In order to avoid these serious situations that lead to the loss of dental units, we suggest a plan of prophylactic measures that should comprise:

- Evidencing the bacterial plaque;
- Instructions for hygienization, brushing;
- Six-year-old molars sealing in the children with good hygiene;
- Fluoridation with gels through topical applications;
- Patients’ dispensarization by periodical check ups, every six month or yearly, according to tooth decays predisposition;

By intercepting the school age children, we have better chances of success, because at this age they become accustomed to hygiene rules and behaviours may be changed for the motivation of a proper oral hygiene.

Sanitary education is absolutely necessary in order to accomplish the prophylaxis programmes successfully, and its results may become at their turn true educational instruments. Although we believe that the individual education for the oral hygiene is more efficient than at group level, hygiene lessons may be kept in school with the participation of the medical team and of the teachers.

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