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CASE STUDY

EPIDEMICAL SURVEY ON CARIES USING DMF CARRIED OUT AMONG THE CHILDREN´S WITH FIVE YEARS OLD

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ABSTRACT

This epidemiological cross-sectional study of the oral health status of the child population of both genders enrolled in Municipal Schools Early Childhood Education; José Aidar, Neil Calil, September 7, located in New Granada in the State of São Paulo. It was intended to assess the oral health, measuring the condition of the affected or not dental caries structures arising directly or indirectly from the condition of hygiene, diet, quantity and quality of health care and services provided to the population. This study followed the methodology recommended by the World Health Organization (WHO) to conduct epidemiological studies, using the DMFT index. The form used is a simplified form to the LEC (Epidemiological Survey of Caries). One may observe that the children of this community are at risk of tooth decay due to the frequency of cariogenic food, a lack of education about oral hygiene and poor access to care provided by the health service in the region. According to the results as a basis to guide planning and demand preventive and curative oral health services, should be encouraged to care and health care of this population.

INTRODUCTION

Epidemiological surveys are of great importance in the field of public health and provide essential elements for monitoring health conditions and system performance that is being applied. Epidemiological surveys in oral health in Brazil occurred in 1986, 1996 and 2003 and 2010 were carried out by the Ministry of Health (MOH), through the Department of Primary Care (DAB), the National Coordination of Oral Health Surveillance Secretariat of Health (SVS) linked to it [9, 19; 20, 24; 32].

The SBBrasil 2003 outlined a major diagnosis of oral health profile of Brazilians this was the basis for the implementation of the key strategies proposed in Smiling Brazil. In this survey we were evaluated 108,921 Brazilians and 49,049 men (45.03%) and 59,872 women (54.97 %). Already SBBrasil 2010 was the first survey after the start of the smiling Brazil in 2004. In this research, the sample was composed of 177 municipalities, 26 state capitals, the Federal District and 150 municipalities of different population ratios. Altogether 37,519 people were examined of 5, 12, 15 to 19 years, 34-45 and 65-74 years. The indices used were those recommended by the World Health Organization (WHO), DMFT (permanent teeth) and dmft (deciduous teeth) [5].

When making a comparison between the data collected in SBBrasil 2003 and SBBrasil 2010 it may be noted that after the smiling Brazil deploying the DMFT / DMFT = 0 in the prevalence of caries decreased for almost all ages. Caries free was represented in proportion, in 2003 and 2010, respectively, 40.63% and 46.6% - to 5 years; 31.08 % and 43.5 % - to 12 years; 11.06 % and 23.09 % - from 15 to 19 years; 0.52 % and 0.9 % - 35-44 years; 0.52 % and 0.2 % - 65-74 years old [20]. The percentage of DMFT / c-d = 0 are always lower in the North and Northeast compared to the South and Southeast. Brazil. Ministry of Health. Department of Health Care. Department of Primary Care.

Epidemiological research schools are made at the national level, showing an overall condition of the problem. Already local surveys are important to express the reality of each region or municipality, so that the appropriate measures for improving the oral situation of children are taken. For this matter, this study aims to determine the oral health status of the students of the Municipal Children's Education Schools in New Granada, São Paulo, since it had not yet been implemented and there are

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no effective preventive measures these institutions. This study aimed to plan for management and evaluation of policies to improve the oral health of school children.

Study Design

This is an exploratory, observational and cross-sectional study [1], which were performed oral examinations to assess the prevalence and severity of dental caries and periodontal diseases, as well as factors related to socioeconomic status, access to dental services and health perception. We used the methodology recommended by WHO, studying with natural light and a spatula disposable timber, commonly used to diagnose oropharyngeal. We did not perform the examination with the explorer, as this survey is not reliable to diagnose lesions of occlusal surfaces of enamel. Not using the conventional probe further prevents the transfer of microorganisms from one surface to the other, as well as the possibility of damaging the integrity of the demineralized enamel surface, thereby favoring the appearance of lesions.

Calibration

Only one examiner performs the clinical examination for carrying out an epidemiological survey. That way we avoid the problems of calibration between different examiners, safeguarding the integrity of the examinations. When an epidemiological survey is carried out by a team, it is necessary that the examiners are trained to provide consistency in clinical trials. This is called calibration. The objectives of the calibration is to ensure uniformity of interpretation, understanding and application of the criteria for various diseases and conditions to be observed and recorded. Ensure that each professional can examine uniformly standardized way and minimize variations between different examiners.

Characterization of the Study Area

This activity was developed in Nova Granada, Brazil. The government is represented by UBS (Basic Health Unit), PSF (Family Health Program), Santa Casa, Desk Emergency Department, state and municipal schools, Municipal Preschools, Forum, Mail, Police, Ciretran. The Preschools Neil Calil, José Aidar, September 7, have the purpose of giving basic education, according to the educational legislation, providing the full development of the student, his preparation for the exercise of citizenship and his qualification for work. The course of early childhood education, the first stage of basic education aims at the integral development of children up to six years old, in their physical, psychological, intellectual and social aspects, complementing the family and community action. They are offered by schools, classes in the morning and classes in the afternoon.

Universe and Sample

The research sample consisted of 80 children of both genders, enrolled in Child Education Municipal Schools; José Aidar, Neil Calil, September 7 in New Granada, upon authorization by letter of consent signed by the coordinator of the institution, as well as parental consent by signing the Instrument of Consent. The 80 children are aged 5 years; in which 40 children studying in preschool José Aidar, 20 children studying in preschool Neil Calil, and 20 other students at preschool September 7. From what has been proposed in SB Brazil project, the age-rate recommended by the World Health Organisation (5 years) was chosen because of the interest in relation to levels of oral diseases in deciduous teeth, since they can show changes in a period shorter time than the permanent dentition in other age-index, and is used internationally to measure the caries attack in deciduous teeth.

Materials Used

For data collection, the biosecurity apparatus was used, with cap, mask, apron, goggles and gloves, an examination record with indices of primary teeth and / or permanent, and treatments that fall into the following element, and disposable wooden spatulas.

Data Collect

Data collection should be carried out in natural light using disposable wooden spatula, the data must be recorded on the card, which contains the child data, which will be attached to the Consent and Informed, signed by the responsible. Only one examiner performs the clinical examination for carrying out an epidemiological survey. That way we avoid the problems of calibration between different examiners, safeguarding the integrity of the examinations [8].

Notation Used

To assess the dental condition, was chosen dmft due to its worldwide support, as is recommended by the World Health Organization (WHO) since its first edition in 1977. Several updates have been made over the years, in addition to diagnostic criteria have been incorporated into the treatment requirements. Thus, there was a higher qualification of the index, the ability to perform various combinations of diagnosis and treatment. The codes and criteria were the same as SB Brazil Project [20].

Data analysis

The data collected will be entered and analyzed using SPSS for Windows, version 8.0. To make comparisons between students from public schools, will apply statistical tests chi-square, to measure the difference between proportions (tooth decay), and Mann-Whitney U test, to test the differences between the decay rates. The asymmetric distribution of Ceo-D indices justified the choice of non-parametric tests.

RESULTS

80 children of New Granada kindergartens and 47 of these children had dental caries requiring dental treatment were examined, not preventive but curative form (figure 1). In these 80 children analyzed can determine the intra oral clinical examination that the situation of your teeth is very unfavorable

to health as a whole. In the review it is clear that the conditions presented denote precariousness in controlling the disease and lack of knowledge of parents and teachers of the importance of prevention methods, this fact can be seen in figure 2.

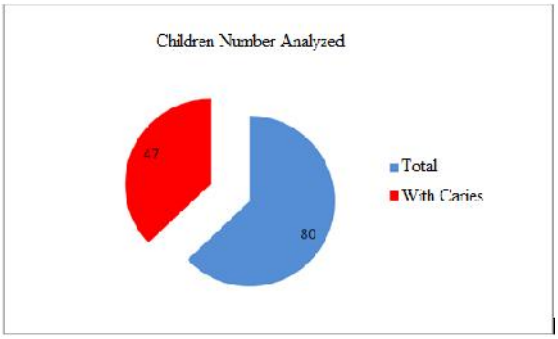

Figure 1 Number of children assessed and the number of children with carious teeth.

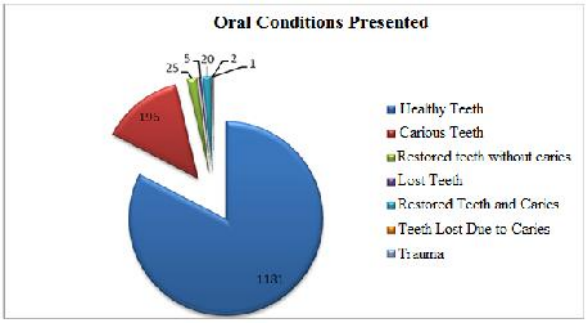

Figure 2 Oral findings in 80 children evaluated.

This epidemiological work demonstrates the importance of awareness and awareness of mothers about the risk of disease transmission decay to your son, for mothers who received guidelines on how to prevent this disease can teach and collect children healthier habits. And sure the school has a fundamental role in guiding these children to healthier habits and to be a disseminator of health concepts

The early acquisition of bacteria of children occurs mainly through maternal saliva, but probably also from other sources of infection [22]. There is high prevalence intrafamily transmission of cariogenic bacteria [28]. In a study by Kulkarni et al. [16] The analysis of the bacterial strains of different families of individuals has always heterogeneous, however, analysis among members of the same family, showed frequent infections by common lines. This was also confirmed by Hamada et al. [13].

Individual habits, family, as well as oral hygiene may regulate the establishment and development of cariogenic potential of the bacteria [21]. Thus, the identification of bacteria transmission sources is essential to the development of caries prevention strategies, as this Control can not affect the teeth, thus not establishing itself as tooth decay.

Among the findings to WHO indicates possible treatments for certain specific cases. The findings of this research should be treated beyond the caries teeth that have been affected by this disease, thus the figure 3 below provides the following forms of treatment of teeth affected by caries.

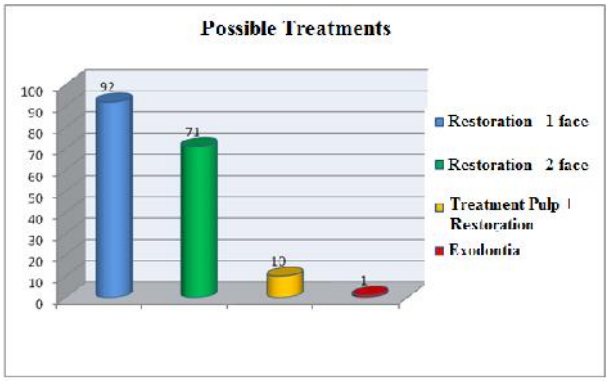

Figure 3 Possible treatments of teeth affected by caries.

DISCUSSION

Much is said in oral health, minimally invasive dentistry, but still is places that apply to dentistry Age of Pain, where the treatment of caries is basically the extraction, or the Age Restorative where any decay signal if large preparations with much of tooth structure destruction.

This is very worrying because the dental caries is the main disease that affects the oral health of children, it is a progressive disease responsible for the destruction of enamel, dentin and cementum by acid, initiated by microbial activity on the tooth surface [1]. It comes from the epidemiological point of view, tooth decay is a major health problem worldwide, but its occurrence has been declining since the late 70 [26, 30]. This index is not very promising when it comes to primary elements [29].

The main measures taken to reduce caries include the addition of fluoride in public water supplies and toothpastes, and the reform of public health services [1-3, 30]. By analyzing the oral microbiota as a whole, can be said that is the most complex of our whole body, only bacteria there are over 30 different genres, covering more than 500 different species. In the mouth, there are about 350 bacterial species have grown and more than 200 have been recognized by genetic methods [31]. Thus associating risk factors such as poor diet, poor dental hygiene becomes undoubtedly a determining factor in the appearance of carious teeth [27].

Epidemiological research provides the planning of health services in a given area, and thus helps to identify, monitor and evaluate the distribution and trends in severity and prevalence of disease. Encouraging the development of good health programs and proper planning of the amount and type of professionals needed [2]. Healthy teeth and oral soft tissues improve the health status of any individual, a good dentition is essential to an acceptable facial profile especially when it comes from the act of speaking and smiling, feed. Therefore, you need professional assistance and health education at school age and preschool, as well as adequate food, thus to pass on an oral health quality [4].

An analysis of the epidemiological profile of dental caries in children was held 12 years in the city of Lajeado / RS, using the DMFT index between the period 2002-2007, due to the

study were examined 112 students from municipal public. After collecting data they were analyzed from the conditions of permanent teeth; caries experience according to the gender of school and comparison between school more joined the oral health program and less adhered. Thus, it was concluded that there was an improvement in DMFT index of 3.82 to 2.7. However, what is needed is permanent these educational activities in oral health [25].

In 2013 it was carried out a survey to assess the impact of severe early childhood caries in quality of life related to oral health of preschool children in social deprivation and can confirm that this type of caries had greater negative impact on quality of life compared to caries free groups and no severe early childhood caries [12].
A comparison of caries experience in school from 3 to 6 years of public institutions of early childhood education that had not had dental care in Goiânia / GO (2001) was conducted for this we used 275 children attending institutions benefit from assistance dental and 261 children institutions do not benefit from dental care. It was observed a higher number of children with teeth restored in institutions with dental care, but in relation to caries prevalence was observed a difference between the two groups [11].

More effective measures to combat tooth decay would be through earlier performances possible, ie preschool, because the sooner it is affected the child by pathological microorganisms in most deciduous dentition the prevalence of caries in this dentition, and so causing also a strong predictor of caries in permanent teeth [4, 7, 18, 29].

The introduction of oral hygiene habits in daily life is one of the main care to maintain the general health of an individual. Thus, by brushing the biofilm is disorganized, preventing the formation and release of demineralisers acids that are responsible for the carious process and the periodontal disease [15, 23].

The World Health Organization (WHO) has established, since the 60s, standards for epidemiological surveys of dental caries. This standardization is offered to countries and researchers to be able the results of comparisons [14, 15, 23]. The most appropriate method of clinical diagnosis of dental caries epidemiological surveys in oral health is the visual-tactile [6, 34]. These surveys, in their great majority, are made according to WHO standards, using as an evaluation method checking teeth decayed, missing or extracted and restored (DMFT / Ceo-D).

Due to the great importance of preventing caries in order to obtain a correct development of the entire face, requires greater efficiency in the measures taken to be provided in a decrease, especially in childhood. In Brazil, it is possible to observe an unequal distribution of dental caries throughout the country, being in better conditions the states of South and Southeast compared to the Northeast [10, 17, 33].

Mostly school epidemiological investigations are made at the national level, showing an overall condition of the problem. Already local surveys are important to express the local reality of each region or municipality, so that the appropriate measures for improving the oral situation of children are taken. For this matter, this study aims to determine the oral health status of the students of the Municipal Children's Education Schools in New Granada, São Paulo, since it had not yet been implemented and there are no effective preventive measures these institutions.

With the results that will be obtained here, you can make a plan for management and evaluation of policies to improve the oral health of school children. With example of some countries in Asia and Europe [14,15].

CONCLUSION

This study indicated that oral health of children of New Granada urgently needs a bandage oral health program, but without a shadow of doubt preventive. Health starts from the mouth and the transmission should be reduced, for this is indicated rigorous design guidance and family education in the care of the oral health through lectures in schools with children and their families. Reinforce the importance of controlling diet for a healthy life and a mouth without teeth decayed.

Competing interests

The authors declare que they have no competing interests.

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