

Editorial

Oral health in Hidalgo, Mexico

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Introduction

According to the report "Global Burden of Oral Conditions in 1990-2010" derived from the "Global Burden of Disease (GBD) 2010 Study", oral diseases and alterations remain highly prevalent, collectively affecting around 3.9 billion people in the world. Untreated dental caries in the permanent dentition is the most common oral health problem and has the greatest burden globally, while severe periodontitis and untreated caries in the primary teeth were the sixth and tenth most prevalent conditions, affecting 11% and 9% of the world population, respectively. Similarly, severe tooth loss was the 36th most prevalent condition, with an overall estimate of 2%.¹⁻⁴

In the State of Hidalgo, as in Mexico, oral diseases are not alien to the epidemiological transition observed in the world; since we observe at the same time the existence of dental caries as well as oral cancers. The oral health priorities in Mexico are focused on reducing the most prevalent oral diseases and alterations in the population. This can be achieved using various tools, such as education-prevention in schoolchildren, education-assistance, and fluoridation of salt, among others.^{5,6}

Oral diseases, such as dental caries, periodontal diseases, and cancers of the mouth and pharynx, are a public health problem affecting the industrialized countries around the world and, increasingly, developing countries. The World Health Organization has estimated that five billion people on the planet have suffered dental decay.⁷ Likewise, there are a series of oral alterations that affect various aspects of the lives of people who suffer from them. For example, malocclusions that follow dental caries and periodontal disease are the most prevalent alteration in the population.⁸ Another alteration that is of concern among oral health workers is dental fluorosis; which is caused by excessive ingestion of fluorides. The impact on health due to the prolonged ingestion of F- depends on three main factors: daily intake of F-, the degree of nutrition, and status of some vital organs.⁹

Among the congenital malformations, one of the most common is the orofacial clefts, mainly the lip and/or cleft palate (LPH), makes these a problem of oral health.¹⁰ For Mexico, congenital malformations have an incidence of about 1.1. to 1.39 per 1,000 registered live births; they also occupy the first place among all congenital anomalies.¹¹

In a review of the literature by researchers of the Academic Area of Dentistry of the Autonomous University of Hidalgo on oral health of the Hidalgo, 25 documents were included: five on dental caries,¹²⁻¹⁶ two on root caries,^{17,18} three on periodontal disease,¹⁹⁻²¹ six related to tooth loss,²²⁻²⁷ seven on dental fluorosis,²⁸⁻³⁴ and two addressing lip and/or cleft palate.^{35,36} The following results were found.

Coronal and radicular caries

In Mexico and Hidalgo, there is limited information on the magnitude of the main oral problems. In this sense, we found five studies on coronal caries and one on radicular caries. The studies were carried out in Tula de Allende, San Agustín Tlaxiaca, Zempoala, and Pachuca. The National Caries Survey has also reported findings. The age of the subjects studied ranges from 5 to 15 years. The prevalence of caries ranges from 42% to 69% depending on the age group in question. While the CPOD index goes from 0.37 to 2.50.

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On the other hand, in the study on radicular caries, it is reported that in adults the prevalence is greater than 50% while the average of affected surfaces is greater than 7.

Periodontal disease

With regard to periodontal diseases, our current knowledge remains limited. There are no results in apparently healthy people, with all three identified studies having been performed in diabetic patients. However, these studies identify periodontal diseases as of high prevalence, extent, and severity. Also, both caries and periodontal diseases have a cumulative character that increases with age, which can ultimately lead to tooth loss.³⁷

Loss of teeth

The loss of teeth is not a disease in itself, but rather is a consequence of various events. In this sense, tooth decay is one of the main causes of tooth loss in children and young people; while the periodontal diseases are the main cause of tooth loss in the adult population. Tooth loss refers to the loss (usually incremental and unplanned) of one or more natural teeth. While the total edentulism is the state in which all teeth have been extracted or lost for any reason.^{38,39} Regarding this event, the prevalence of edentulism varies according to age, finding a prevalence of 4.4% to 36.7 %, this variation also depends on the type of population. On the other hand, the prevalence of loss of at least one tooth is more than 60%.

Dental fluorosis

In addition to oral diseases, there are alterations that affect the oral health of the subjects who suffer from it, among them are fluorosis, malocclusions, and cleft lip and/or palate.

In relation to dental fluorosis, in Hidalgo, several studies have been carried out. In this review, we were able to identify seven such studies. Among the most important results is that, in Hidalgo, dental fluorosis has a high prevalence and that it is a public health problem, since almost 100% of the subjects of certain communities present this alteration in its various degrees, where the concentration of water is well above what is recommended for therapeutic purposes.

Cleft lip and/or palate

On the other hand, orofacial clefts, particularly cleft lip and palate, are a problem of oral health due to their implications and impact on various aspects of functional and emotional development throughout life, as well as economic in both homes' patients as in the Health System for their attention. In Hidalgo, a case-control study was identified in which some risk factors for this anomaly were determined. This study was carried out at the Hospital del Niño DIF in the city of Pachuca. Another ecological design study presents the LPH rate per 1000 live births for different years. The incidence rate varies between 0.24 to 1.85.

The main research topics that stand out are dental caries and dental fluorosis. However, there are other topics not covered, such as malocclusions, although this is considered the third oral alteration with the highest prevalence after caries and periodontal disease. In this sense, we can say that it is necessary to carry out more studies on the different diseases and oral alterations to carry out evaluations and be able to make recommendations on oral health policies.

It is imperative to open postgraduate courses to generate trained personnel and perform health care in Hidalgo. In addition to conducting research in this area of health. In Hidalgo the preparation of personnel trained in oral research is needed to impact on: 1) epidemiological surveillance; and 2) increase the number of publications on the subject in Hidalguenses.

Finally, it should be noted that projects have been developed, mainly in the Academic Area of Dentistry of the Autonomous University of the State of Hidalgo, where other oral events are being studied, such as oral hygiene,^{40,41} position of the third molars,⁴² and pulpal pathologies.⁴³

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