


Editorial

Oral Health and Related Factors Associated with General Health and Quality of Life

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Abstract: Oral well-being is an integral part of individual general health. The mouth and teeth are, in fact, part of our body, increasingly characterizing personal identity. Oral diseases are a public health problem that has a growing prevalence. Oral pathologies can occur in childhood, and as they have a chronic and progressive course, if not properly treated, they can affect the relational, psychological, and social skills of an individual. The population most affected are those with a low socio-economic level, so much so that the presence of diseases of the oral cavity is considered a marker of social disadvantage. In this regard, much effort is needed from scientists, and their applied sciences, in order to give the knowledge required for public health personal to take note of the seriousness of the situation and to start changing the way we deal with the problem.

Keywords: oral health; periodontitis; systemic health; caries; oral pathology; applied sciences

1. Editorial

In July 2019, The Lancet published a full-bodied report: “Oral diseases: a global public health challenge” dedicated to investigating this topic, often overlooked by public health policies [1]. The relationship is the result of a collaboration between thirteen world academic institutions. Top experts in the field of preventive and community dentistry took part in the work. Many of them are part of the WHO collaboration centers for oral health inequalities. In this work the main pathologies of the hard and soft tissues of the oral cavity were analyzed, from which the different chapters of the relationship derive: (1) Overview of oral pathologies, (2) Epidemiology, (3) Effects at the individual, family and social level, and (4) Social determinants ampersands.

1.1. Caries

Caries is a chronic-degenerative pathology with a multifactorial etiology resulting from alternation of periods of demineralization and re-mineralization linked to the pH of the bacterial plaque [2,3].

The reduction in pH is due to the presence of acidogenic and aciduric bacteria that ferment sugars taken in through the diet. A cavitory lesion is the clinical sign of caries disease, which can be arrested in its early stages through correct exposure to fluorinated compounds [4]. Fluorine is the cornerstone of caries prevention and is necessary for all individuals with natural dental elements [5]. It is also important to obtain a good endodontic treatment in cases of endodontic lesions. In this regard, Dioguardi et al., in their systematic review published in the present Special Issue, have underlined the importance of the sterilization process of endodontic instruments as a key factor for an endodontic treatment [6].

1.2. Periodontal Disease

Periodontitis is a chronic inflammatory disease of the supporting tissues of the dental elements caused by the presence of anaerobic bacteria with the interaction of three main cofactors: host

susceptibility, environmental, and behavioral factors [7–11]. More specifically, Valletta et al. [12] have evaluated the association between facial typology and gingival biotype in patients by means of two-dimensional and three-dimensional evaluations of facial typology using facial scanners. The authors found that there was no statistically significant association between facial typology and gingival biotype. Polizzi et al., in their report, have underlined the fundamental role of Myeloperoxidase in the alveolar bone loss during periodontitis [13], while Byun et al. have shown the role exerted of periodontitis in patients that undergo tonsillectomy [14].

Tobacco and chronic diseases such as diabetes, cardiovascular disease, and dementia contribute to increased risk of periodontal disease. The disease manifests itself in its initial stage as gingivitis, a reversible pathology characterized by bleeding, swelling of the gums, edema, and the absence of periodontal pockets [15,16]. If left untreated, it develops into periodontitis, an irreversible pathology characterized by radiographic loss of bone in the presence of loss of attachment to the probe [17] is a pathognomonic sign of the periodontal pocket [18,19], especially during orthodontic treatment, as shown by Lo Giudice et al. in their report [20].

1.3. Oral Cancer

Oral cancer in all its forms (e.g., carcinoma of the lip, tongue, pharynx, and oral cavity) is increasingly common worldwide [1,21]. Squamous cell carcinoma is the most common cancer in the oral cavity [22]. The main risk factors are smoking and tobacco, especially if chewed (in the form of Bethel leaves), alcohol, and infectious agents. The most affected demographic is that of elderly men of low socio-economic level. Oral papilloma caused by Human Papillomaviruses (HPV) is particularly frequent in high-income populations, especially among younger demographics.

2. Epidemiology of Oral Pathologies

The latest epidemiological studies reveal that data on caries not treated with deciduous and permanent dentition have remained unchanged over the past 30 years, to the detriment of what is perceived by academic and non-academic society. Data from 2017 confirm that untreated caries in permanent teeth remain the most common disease worldwide, affecting 34.1% of the population [1] (Figure 1).

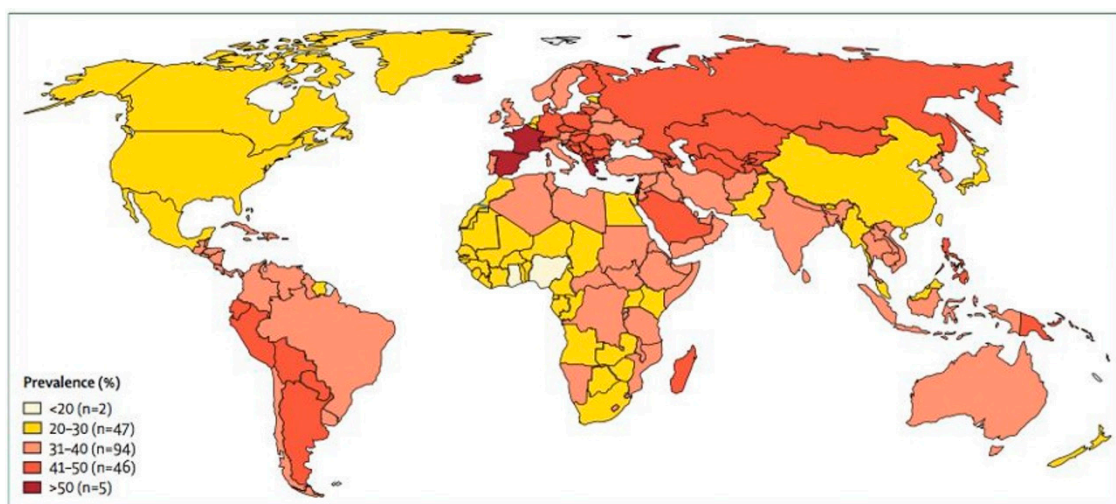


Figure 1. World prevalence estimate of untreated caries in permanent dentition in 2017, from the Institute of Health Metrics and Evaluation.

Despite the undoubted improvements obtained in terms of general health, the incidence of various pathologies of dental interest remains high.

It is, therefore, necessary to promote and favor specific caries prevention programs for periodontal diseases and neoplasms in order also to avoid the onset of clinical conditions that entail disabling psychophysical impairments, with a consequent commitment of substantial financial, personal, and collective resources for rehabilitation therapy [23,24].

The etiology, pathogenesis, and evolution of the aforementioned pathologies, and the fact that prevention represents a fundamental measure in terms of efficacy and favorable cost-benefit ratio, are well known.

Furthermore, since various risk factors for diseases of the oral cavity (e.g., bacteria, inadequate diet, smoking, incorrect lifestyle) are common to other chronic degenerative diseases, any preventive measure put in place must be considered as a wider measure of promotion of individual overall health [25].

Most of the most common pathologies of the oral cavity, for diagnostic purposes [26], make use of well-coded and proven efficacy pathways, ranging from general medical anamnesis to specific stomatological anamnesis [27], to extra-intra-oral physical examination [28], to radiographic investigations, photographic documentation, and examination of study models [29–33]. Furthermore, the introduction to daily practice of recent innovative technologies will allow clinicians to obtain increasingly precise and punctual information, in order to considerably reduce the margin of diagnostic error.

The overall disease burden of oral disease, understood as a measure of the weight of the disease according to the disability-adjusted life year (DALY) index, is comparable to that of tuberculosis or malaria [30].

Here then, is the paradox of oral health: In the face of a very high number of affected individuals, of the sufferings and consequences of oral diseases on general health [34–38], which are moreover particularly serious in children, the underestimation of the problem appears scandalous.

3. Conclusions

Therefore, the time has come for public health to take note of the seriousness of the situation and to start changing the way we deal with the problem. It is possible to improve oral health and reduce inequalities at a global level by investing resources in prevention and basic care, and not by relying exclusively on the private dentistry market, which can be accessed by a dramatically low number of people compared to the many who need it.

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