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Periodontal health: A forgotten cornerstone for overall health

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Abstract

Scientific and clinical evidence shows periodontal and systemic healths are closely linked. Periodontitis is a recognized risk factor for several systemic conditions, such as cardiovascular diseases, diabetes and adverse pregnancy outcomes. Nevertheless, the role of oral diseases in overall health is greatly underestimated by most physicians and patients. It is essential develop measures focused on enhancing physicians and patients' perception of the importance of oral health.

Keywords: *Oral health; periodontitis; systemic health; health prevention and promotion*

Multiple scientific and clinical evidence supports a strong association between periodontits and various systemic diseases [1,2]. The concern about this association began with two papers published in 1989 that identified poor oral hygiene as a risk factor for coronary heart disease and stroke [3,4]. Subsequently, several studies were developed, with periodontitis being associated with increased risk of cardiovascular diseases [5,6], diabetes mellitus [7,8], obstetric complications (premature births / low birth weight) [9,10], pulmonary problems (chronic obstructive pulmonary disease and pneumonia) [11], chronic renal failure [12], infertility[13] and various types of neoplasms [14].

The association with cardiovascular diseases is the best studied and consequently it is strongly supported by scientific evidence [1,15]. The bacteremia and the systemic inflammation associated to periodontitis are important factors in the initiation and perpetuation of the vascular wallinjury, and consequently these are the mechanisms pointed out for this association [16]. The position of the American Heart Association supports an association between periodontitis and atherosclerotic disease, as well as the benefit of periodontal therapy to reduce systemic inflammation and endothelial dysfunction [17].

Similarly, the association between periodontitis and diabetes mellitus has been known for a long time, being considered a bidirectional association, ie, diabetes is a modifying factor of periodontitis, while periodontitis is a complication of diabetes [18]. Several studies have demonstrated the greater prevalence of periodontitis in diabetics, as well as a greater disease severity [18-20]. Additionally, periodontal treatment is associated with a reduction of hemoglobin A1c, which corroborates a better metabolic control. Despite the lack of unequivocal evidence, this improvement in metabolic control appears to be sufficient to have a significant impact on the reduction of microvascular complications of diabetes and associated mortality [20].

Periodontitis is also reported as an important risk factor for adverse pregnancy outcomes, such as premature births and low birth weight. Several meta-analysis and systematic reviews reinforce this association [10,21]. One of the mechanisms implicated results from elevated levels of circulating cytokines, which appear to interfere with placental viability. In addition, some studies have shown the presence of periodontopathogenic microorganisms in the amniotic fluid of women with periodontitis, and a correlation was found between the severity of periodontitis and the risk of preterm birth [22,23]. Despite no clearly demonstrated benefits of periodontal treatment in women at risk of obstetric complications, it seems good practice to apply preventive strategies in these women [23].

Although there is no evidence of a causal relationship, current evidence allows us to state the existence of an association of periodontitis with these various systemic diseases [1,24]. Consequently, it is important to give more attention to the diagnosis and treatment of oral diseases, namely periodontitis, to improve the patients' systemic health [25-28].

Nevertheless, oral diseases are still among the most prevalent conditions today worldwide, yet they receive little attention by social and medical authorities. The institutional separation of oral health care providers from the other health care systems, the deficient oral health knowledge within physicians' education and the global lack of awareness, among physicians, regarding the consequences of a poor oral health, are the biggest problems. It is undeniable that both dental and medical professionals must work hard together to overcome the structural problems and, ultimately, improve a good oral and systemic health [25-28].

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