



17. DENTAL CARIES OF CHILDREN WITH CONGENITAL CARDIAC MALFORMATIONS

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Introduction. Congenital heart malformations (CHM) affect approximately 8-10 of every 1000 births worldwide. Dental caries (DC) is one of the most common diseases, in the etiology of which the impact of the microbial agent is recognized, and its association with systemic diseases such as cardiovascular diseases can cause severe complications in children, because chronic foci of odontogenic infection can increase the risk of developing infective endocarditis (EI). At the same time, the research dedicated to DC affecting children with cardiac pathology and in particular, CHM, are less numerous, the data of different authors being often contradictory.

Aim of study. The aim of the present study was to carry out a review of the specialized literature regarding the impact of dental caries on children with congenital heart malformations.

Methods and materials. In order to achieve the purpose of the study, the search for scientific publications was carried out according to the keywords: "children with heart diseases", "congenital heart disease", "valvular heart disease", "infective endocarditis", "oral microbiota", "dental caries", "oral health". From the 108 sources obtained, "Free full text" articles were selected, which were 36 in total, but 28 articles published during the last 10 years were selected for analysis.

Results. Current research in the field has shown that cardiac pathology, including EI, is increasing over the last 10-15 years. Several studies have shown that *Streptococcus mutans* from multiple carious lesions could migrate into cardiac tissue. Thus, there was a need to develop effective methods to prevent *Streptococcus mutans* from invading the bloodstream and, ultimately, the endothelium of cardiac tissues. Since these methods are still not progressing, preventive techniques such as oral hygiene, which can ensure the elimination of these bacteria, is the only approach that can be followed by most patients.

Conclusion. A relationship between *Streptococcus mutans* bacteremia and the worsening of cardiovascular diseases, especially EI, has been demonstrated in several studies. Therefore, severe dental caries may be an important risk factor for bacterial colonization in cardiac tissues. Thus, studying the level of dental caries in children with CHM is important not only for researchers in the field of cardiology, but also for the dental community in order to develop effective methods to prevent DC.