

Assessment of periodontopathogens and periodontal status in children under 13 years of age

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Abstract:

Background and Aim: Periodontopathic bacteria such *Aggregatibacter actinomycetemcomitans* (Aa), *Porphyromonas gingivalis* (Pg), *Prevotella intermedia* (Pi) are considered to play a prime etiologic role in the initiation and development of the periodontitis, and the detection of periodontal pathogens before puberty may be helpful in identifying the children who need more effective oral health programs in order to minimize the risk of periodontal disease after puberty. The aim of the present study was to investigate the prevalence of periodontopathic microorganisms and periodontal status in children under 13 years.

Materials and Methods: This cross sectional study was performed on sixty systemically healthy children. All the subjects were enrolled with parent consent. Clinical examinations consisted of Plaque index (PI), Gingival index (GI) and Bone Level. Prior to any clinical measurements plaque samples were collected from sub and supra the gingival sites of the first permanent molars or the second primary molars in the absence of them, using a sterile curette. After that a sterile swab was used to obtain the samples from the buccal mucosa and the dorsum of the tongue. The samples were cultured, after pooling, for the presence of the bacteria, using API-ZYM system. Prevalence of periodontal disease and related bacteria was evaluated and their correlation was tested by chi-square.

Results: Out of 60 studied children, 40% contaminated with periodontopathogenic bacteria, 38/3% of subjects were positive for the presence of Aa, 30% of cases had mild to moderate gingival inflammation. There is a significant relation between increasing age over 6 years and the prevalence of this bacteria.

Conclusion: According to the results of this study, there is a high prevalence of Aa colonization in children under 13 in studied population, and this is significantly associated with the ages of the subjects.

Keywords: Periodontopathogenic bacteria, periodontal status, Plaque index, Gingival index, Bone level.

Manuscript submitted: Nov 2009, Revised and acceptance: July 2010

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