

28th Euro Dentistry Congress

September 16-17, 2019 | Amsterdam, Netherlands

Possible link between periodontitis and cardiovascular disease: A clinical case

Periodontitis is a highly prevalent and complex disease, initiated by a dysbiotic biofilm but progressed largely by an exaggerated under-regulated host immune-inflammatory response. Its primary features include the loss of periodontal tissue support of the tooth, manifested through clinical attachment loss and radiographically assessed alveolar bone loss, presence of periodontal pocketing and gingival bleeding. Periodontitis could increase the systemic inflammation in patients with CVD due to bacteremias with periodontal origin. A male patient, 47, was presented to the University San Sebastian at Concepción, Chile, School of Dental Clinic on June 01, 2016 for oral and periodontal examination. The patient's medical history included dyslipidemia (DLP), coronary heart disease (CHD), acute coronary syndrome (ACS), angina and history of myocardial revascularization surgery in 2013. Full-mouth probing depths showed overall pockets up to 8 mm. Loss of attachment levels were in the range of 8 mm. The periodontal examination described the gingival margins as erythematous and edematous, with multiple periodontal abscesses, increased tooth mobility and furcation involvement. Radiographic evaluation showed severe alveolar bone loss. The diagnosis was generalized as severe chronic periodontitis. The nonsurgical periodontal treatment included scaling and root planning (SRP), local treatment with chlorhexidine and systemic treatment with amoxicillin and metronidazole. The treatment was successful with significant improvement of periodontal parameters. However, during 2017, it was not possible to continue the treatment due to worsening of the cardiovascular condition, in this case a new acute coronary syndrome (ACS) that was treated with angioplasty placing two medicated stent. Another acute episode of the coronary disease happened the same year and was treated with another angioplasty with balloon catheter. Drugs in use were: clopidogrel-75 mg day, carvedilol-3.125 mg bid, atorvastatin-80 mg at night, aspirine-100 mg day and enalapril-10 mg bid. Even with local and systemic drug treatment, aimed at prevention of systemic bacteremia due to the invasive periodontal procedures, the patient underwent a ACS, suggesting a possible antecedent infection link to a vascular plaque, leading to subsequent plaque destabilization, rupture and ACS. Despite the systemic condition, a maintenance non-invasive management of periodontitis was possible, avoiding its progression.

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