Association between Interleukin 1- beta, periodontitis and coronary heart disease

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Introduction: There is an increasing evidence linking dysbalance between various proinflammatory mediators, periodontitis and higher risk of cardiovascular events. Interleukin 1- beta is a potent bone resorptive cytokine that also mediates soft tissue destruction by stimulating prostaglandin production and inducing collagenase and other protease activity.

Aim: of this study was to measure and compare serum concentration of IL-1 Beta (IL-1 β) in periodontitis patients (control group) and periodontitis and coronary heart disease patients (study group).

The study involved a study group of twenty patients (n= 20), over 49 years of age with an initial diagnosis of coronary heart disease admitted at the Coronary care Unit of the Department of Cardiology of University Clinical Center of Kosovo, and control group (n=25). A 10 ml blood samples were taken during the first 24 hours of hospitalization and referred to laboratory. Serum samples were assessed using a kit with a specific high sensitivity methodology—ELISA test.

Statistically results are expressed as mean values and standard deviation (SD), Quantitative variables Student’s t-test, Qualitative parameters Pearson’s chi – square test.

Results: The study showed raised mean values for IL-1 β in the study group compared with control group. The concentrations of protein (control group vs. study group) were as follows: IL-1β (2.1 ± 2.2 vs. 11.0 ± 10.8). The differences between the groups showed statistical significance p < 0.05.

Conclusion: Patients with periodontitis and coronary heart disease results in higher systemic levels of IL-1 β, which may increase inflammatory activity in atherosclerotic lesions.

Biography
Zana Sllamniku- Dalipi graduated in Dentistry from University of Prishtina in 1999, completed her specialization in Periodontology and Oral Medicine in 2005. She finished posgraduated studies, defending Master Thesis in Medical Faculty of Prishtina in 2007 and defending PhD thesis in 2013 in periodontogy field.

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