

P0247**Serum apolipoprotein B may modify the association of periodontitis with serum CRP levels**J.A. Haro¹, A.L. Suominen¹, A. Jula², M. Knuutila³, P. Ylöstalo¹¹Kuopio/Finland, ²Turku/Finland, ³Oulu/Finland

Aim: To study whether serum apolipoproteins A1 (ApoA1) and B (ApoB) modify systemic inflammatory response to periodontal infection.

Material and Methods: This study is based on a population-based Health 2000 Survey and includes a subpopulation of 30 to 49-year-old, non-diabetic, non-rheumatic subjects (n = 2709). The subjects were divided into groups according to the median values for ApoA1 (1.55 mg/ml) and ApoB (1.12 mg/ml). Systemic low-grade inflammation was assessed by serum C-reactive protein (CRP) and was dichotomized using a cut-off value of 3.0 mg/ml. Periodontal infection was measured by the number of teeth with deepened periodontal pockets 4 mm deep or deeper. Odds ratios (OR) and 95% confidence intervals (95% CI) were estimated using logistic regression models.

Results: A higher number of teeth with deepened periodontal pockets was associated with high serum CRP among subjects with a serum ApoB level above the median (OR 1.03; 95% CI 1.01–1.06 (continuous variable)). In contrast, no significant associations were observed among those whose ApoB level was equal to or below the median value. There was no significant association between the number of teeth with deepened periodontal pockets and serum CRP among subjects whose ApoA1 was equal to or below the median or subjects whose ApoA1 was above the median.

Conclusion: Serum lipoprotein levels may modify systemic inflammatory response to periodontitis. Subjects with high serum ApoB appeared to have a stronger systemic response to periodontal infection.

P0248**Evaluate the risk indicators for periodontal disease using a mathematical model of response surface in adult Kiriri Indians from Northeast Brazil**

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Aim: The aim of this cross-sectional study was to evaluate the risk indicators for periodontal disease using a mathematical model of response surface in adult Kiriri Indians from northeast Brazil

Material and Methods: In a sample of 180 individuals, 15 independent (sites numbers $Pb \geq 5$ mm, index plaque, missing teeth, smoking, hypertension, diabetes, frequency of toothbrushing, relationship CAL-age, flossing, gender, income, body mass index, type of toothbrush, use of mouthwash, oral hygiene guidance, education level, bleeding on probing) and 06 dependent (05 different definition of periodontitis and 01 of risk periodontal) [P1] variables were selected. Various criteria based on loss of clinical attachment level, probing depth and bleeding on probing, were used for the definition of periodontitis. The risk diagram (Lang & Tonetti 2003) was used to characterize the periodontal risk. The mathematical model of response surface

was used to assess associations between different definition of periodontitis and its putative risk factors. High R^2 were found for all dependent variables, for the selected models.

Results: The 3rd order model accounted for 83% (R^2 0.89–0.98) of the sample, while 17% (R^2 0.97) was represented by the 2nd. Missing teeth, hypertension, education level and bleeding on probing were associated with periodontitis in all analyzed categories.

Conclusion: Using the mathematical model of response surface, missing teeth, hypertension, education level and bleeding index on probing were associated with periodontitis

P0249**Periodontal probing vs computed tomography: the accuracy and benefit for a proper diagnosis of periodontal disease**G. Isola¹, G. Matarese¹, D. Milardi¹, G. Cordasco¹, L. Ramaglia²¹Messina/Italy, ²Naples/Italy

Aim: The aim of this study was to compare manual periodontal probing with Computed Tomography imaging measures in the same patient to detect and localize alveolar bone loss by comparing linear measurements of the height, depth and width of the defects and identifying combined bone defects.

Material and Methods: Thirty-eight patients with generalized chronic periodontitis were recruited. For each patient the examination consisted of 51 sites showing both horizontal and vertical bone loss (clinical examinations, periapical radiographs), and a CT scan that was performed and assessed by 3 trained examiners. Clinical recommendations comprised a minimal (e.g. supportive periodontal treatment) and a maximal invasive therapy (e.g. extraction and implant placement), based on clinical additional CT data and recommendations. Moreover, the probabilities of saving costs or time, and the numbers needing treatment were analysed with a cumulative distribution function.

Results: The results showed that there were no statistically significant differences between the imaging methods in terms of identification of the pattern of bone loss. Overall, 79% of the CT data was confirmed by the pre and intra-surgical findings (95% confidence interval: 0.576–1.0). While 9% of the sites were underestimated, (CBCT less than pre and intra-surgical value), in only 12% of the sites did the CT data lead to an overestimation compared with the pre and intra-surgical analysis (the molar furcation sites).

Conclusion: CT images compared to clinical examination demonstrates a high level of accuracy in assessing the loss of periodontal tissue and classifying the degree only in sites with furcation involvement.

P0250**Impact of oral health on blood pressure: the IPC cohort**

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Aim: Chronic periodontal diseases involve bacteria-induced inflammation of the tissues supporting the teeth. An inflammatory origin for hypertension has been proposed, and periodontal