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C-reactive protein in peripheral blood of patients with chronic and aggressive periodontitis, gingivitis and gingival recessions

Aims: CRP is a plasma protein that reflects a measure of the acute phase response to inflammation and is one of the markers of choice in monitoring this response. The aim of this study was to compare and evaluate the systemic levels of CRP in the peripheral blood samples of patients with chronic and aggressive periodontitis, gingivitis and gingival recessions and compare them with periodontal clinical parameters.

Methods: All patients (N=158) were examined prior to the initiation of periodontal treatment (PBI, PD, CAL-full mouth periodontal recording). Patients were divided into four groups. Group A consisted of 26 patients with aggressive periodontitis (positive BOP and PD>5 mm in all quadrants), Group B consisted of 111 patients with chronic periodontitis positive BOP and PD>3 mm in >1 tooth in all quadrants), Group C consisted of 13 patients with gingivitis (positive BOP in all quadrants, PD<2.5 mm), and Group D consisted of 8 patients with gingival recessions (no BOP, CAL>4 mm). CRP levels and periodontal parameters were compared. Statistical analysis included; t-test, Pearson correlation, significance threshold p<0.05.

Results: CRP levels—mean/SD (mg/l)—group A 2.8/2.4, group B 2.2/2.0, group C 2.1/1.7 and group D 1.3/0.7. Correlations CRP—periodontal parameters: group A—CRP-BOP p=0.6132, CRP-BOP p=0.0076, group B—CRP-PD p=0.1686, CRP-BOP p=0.0001, group C—CRP-BOP p=0.0241, CRP-CAL p=0.0434, group D—CRP-CAL p=0.8346.

Conclusions: Results of the study indicated that CRP levels increase subsequently with the severity of the inflammatory component of periodontal disease and that the bleeding on probing index showed much better positive correlation with the CRP levels compared to the pocket depth index in both periodontitis patients groups, especially in patients with aggressive periodontitis.

Speaker Biography

Jana Duskova is presently an honourable vice dean for admission process in First Faculty of Medicine of Charles University in Prague, Czech Republic. She has expertise in extensive dental research and teaching experience in the related subject.

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