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#### **CONTRIBUTIONS TO THE ANALYSIS OF THE OXIDATIVE STATUS DURING PERIODONTAL IMPAIRMENT**

#### Foia Georgeta Liliana, Goriuc Ancuta, Surdu Amelia and Hurjui Loredana

Grigore T Popa University of Medicine and Pharmacy, Romania

Introduction: Periodontal disease represents chronic inflammatory disorder induced by products released from the dental plaque and host immuneinflammatory response. Several mechanisms have been proposed to explain the periodontal compromise, including a complex range of factors such as those derived from immune response, direct bacterial influence, host system. some metabolic harmful species such as reactive oxygen species being also recognized as having significant impact.

Aim: The aim of the study is to analysis the myeloperoxidase (MPO) in gingival crevicular fluid (GCF) as a marker of oxidative stress in periodontal disease in patients affected by periodontal oral territories alterations, compared to clinically healthy subjects, associated with evaluation of clinical indicators of the disease.

Materials & Methods: For this study, we selected 42 patients, 22 men and 20 women subsequently divided into three groups after assessing clinical indicators of periodontal impairment: patients with chronic periodontitis (n=6), patients with aggressive periodontitis (n=11) and the control group represented by periodontal unaffected individuals (n=15). From each patient GCF samples were collected using special paper strips of paper, followed by their discharge in phosphate buffer, centrifuged and analyzed for marker of oxidative stress through immune-enzymatic technique (ELISA).

Results: Analysis of MPO in GCF recorded statistically significant differences between the two groups of patients with chronic and aggressive periodontal disease respectively, compared with controls. Moreover, it has been observed a strong correlation between bleeding index and gingival fluid MPO value in subjects with periodontal alterations, which demonstrates that reactive species are important mediators of inflammatory periodontal damage.

Conclusions: Oxidative stress is an important factor in the development of periodontal breakdown and this can be evidenced through MPO, no statistically significant differences between groups of patients with aggressive periodontitis and those with chronic periodontitis being though observed.

### **BIOGRAPHY**

Foia Georgeta Liliana has completed her PhD at Grigore T Popa University of Medicine and Pharmacy, lași, Romania. She is a Professor at Grigore T Popa University of Medicine and Pharmacy, Romania. She has over 100 publications that have been cited over 90 times, and her publication H-index is eight and has been serving as an Editorial Board Member of reputed iournals.

lilifoia@yahoo.co.uk