

Increased levels of soluble triggering receptor expressed on myeloid cells (s TREM) -1 in gingival crevicular fluid from patients with severe periodontitis

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Aim: The accepted etiopathogenesis of periodontal diseases fails to explain the aggressiveness of some cases of periodontitis. This study was designed to evaluate the presence of a new regulator of innate immunity in periodontitis: sTREM-1 in gingival crevicular fluid (GCF).

Material and Methods: GCF was collected at 3 pathologic and one healthy sites from 17 patients with periodontitis, and at one healthy site from 23 control patients. All the clinical parameters were recorded. An ELISA kit was used to quantify sTREM-1 levels in GCF.

Results: The mean sTREM-1 level in collected fluid was significantly higher in pathologic sites than in healthy sites of periodontal patients or control patients: 353.9 pg/ml, 50.2 pg/ml and 25.4 pg/ml respectively. The sTREM-1 concentration was significantly correlated with periodontal pocket depth (PPD) but did not increase proportionately with the augmentation of the PPD. The quantity of sTREM-1 increased with the augmentation of the PLi and GI scores and levelled off at score 2 for both indexes. Smoking seems to be associated with sTREM-1 level. In multivariate analysis, periodontal pocket depth and smoking were statistically associated with highest sTREM-1 levels.

Conclusion: sTREM-1 has been detected in crevicular fluid and is significantly higher in pathologic sites. The presence of this molecule is no doubt related to periodontal tissue destruction. It could be a useful marker of periodontal inflammation.

Biography

Catherine BISSON has obtained her Doctorat from Nancy University School of Dentistry at the age of 23 years and her Master's degree in 2002 from Nancy Sciences Faculty. She has completed her Ph.D. from Nancy University school of Medicine and University school of Chemistry in 2009. She was speaker at EFP (European Federation of Periodontology) of Stockholm (2009) and Vienna (2012). She evaluated as expert different studies: IFRO (International Français pour Recherche en Odontologie) et ECOS-Nord, and reviewed international articles. She has published 7 publications in reputed international journal (the last one is reviewing). She is Associate Professor in Periodontology Department of Nancy University of Dental School.

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