| 10 | **SEVERE PERIODONTAL DISEASE ASSOCIATED WITH SEVERE RHEUMATOID ARTHRITIS IS A PREDICTIVE FACTOR FOR CLINICAL INFLIXIMAB RESPONSE** |

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Background Prediction of tumour necrosis factor α (TNFα) response remains a huge challenge. Recently, a bad dental hygiene was described to be associated with a poor response to TNFα blockers in 20 rheumatoid arthritis (RA) patients. Previously, the authors reported an association between dental bone loss and joint damage in established 147 RA. Here, the authors investigated association between severe periodontal disease (PD) with or without joint damage and response to infliximab in RA patients.

Methods All 101 RA patients enrolled in the study had typical clinical and biological features of severe RA. Their mean (SD) age was 50.6 (15.5) years. Patients were predominantly women (77.2%) with mean disease duration of 12.3 (9.8) years, and 81.2% were RF positive. Most patients had active disease with a disease activity score-28 (DAS28) at 5.1 (1.12) despite methotrexate treatment. They all were treated with infliximab according to the usual regimen in association with methotrexate. American College of Rheumatology 20 response was evaluated at 6 months and DAS28 improvement was calculated. Severe PD was defined by a periodontal bone destruction according to the Hugoson and Jordan criteria by an alveolar bone loss with a horizontal alveolysis over one third of the normal bone height. Joint damage was defined according to the Larsen wrist x-ray score with a right Larsen wrist score ≥2. $\chi 2$ test and non-parametric test were performed.

Results Among our population, 62 patients had severe PD and 73 patients had joint damage. An association between severe PD and joint damage was observed (χ^2 test=3.9; $p<0.05$). However, only 48 patients had destruction at both wrist and periondotal sites while 16 had no destruction at these two sites; 23 had only wrist destruction; and 14 had only periodontal destruction. At 6 months, 71 patients reached the ACR20 response criteria. No association between PD severity or joint damage and ACR20 response was observed. Then, the authors compared DAS28 improvement according to PD severity. Likewise, DAS28 improvement was similar in RA patients with severe PD (median (25th–75th quartile)) at 1.85 (0.59–3.07)) compared to RA patients without severe PD (1.63 (1.01–2.68); not significant). Similarly, DAS28 improvement was equal according to the joint damage status (1.85 (1.05–3.11)) in RA patients with joint damage compared to RA patients without joint damage (1.53 (0.11–2.79); not significant).

Conclusion These results suggested no association between severe periodontal disease and response to infliximab. RA severity markers are not predictor to infliximab response.