ASSOCIATION BETWEEN PERIODONTITIS AND CLINICAL RESPONSE IN RHEUMATOID ARTHRITIS PATIENTS UNDER BIOLOGICAL TREATMENT

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Background: Previous studies showed that periodontitis (PD) was a propagation factor for the severity of rheumatoid arthritis (RA) and our previous epidemiological study revealed that PD was associated with discontinuation risk of etanercept.

Objectives: To investigate the association between PD and the risk of 3 month clinical non-response using the Disease Activity Score (DAS)-based European League Against Rheumatism (EULAR) response criteria in RA patients under biological therapy.

Methods: We enrolled 111 RA patients treated with biologics, including etanercept (n=16), adalimumab (n=44), golimumab (n=7), tocilizumab (n=23), abatacept (n=14), and rituximab (n=7). A qualified periodontist performed the periodontal assessment, and the 3 month clinical response was determined DAS-based EULAR response criteria. We quantified the association between PD and the risk of non-response by calculating odds ratios (ORs) with 95% confidence intervals (CIs) using the logistic regression analysis, after adjusting for confounders including age, sex, tobacco use, RA disease duration, biologic treatment duration, rheumatoid factor and anti-citrullinated peptide antibody, erythrocyte sedimentation rate and C-reactive protein, concurrent medication, and diabetes.

Results: Of 111 RA patients, 83 (74.8%) had PD. 37 (44.6%) of PD patients received periodontal treatment within three months. After adjusting for potential confounders, PD patients had a higher risk of non-response to treatment than non-PD patients (OR, 4.20; 95% CI, 1.06–16.68; p=0.041). Compared with non-PD patients, the risk of non-response was significantly greater in PD patients who did not receive periodontal therapy (OR, 5.12; 95% CI, 1.16–22.56; p=0.031), but not in PD patients who received periodontal therapy (OR, 3.28; 95% CI, 0.72–15.06; p=0.126). Among those who were under treatment under tumour necrosis factor inhibitor therapy (n=67), the risk of clinical non-response was markedly higher in those with PD (OR, 18.6; 95% CI, 1.33–70.04; p=0.025), particularly in those who did not receive periodontal therapy (OR, 14.39; 95% CI, 1.59–130.38; p=0.018).

Conclusions: In RA patients under biological therapy, an increased risk of clinical non-response to treatment was observed in patients with PD, especially among those who did not receive periodontal treatment.

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