SAT0160

EFFECT OF PERIODONTAL TREATMENT ON E-SELECTIN LEVEL IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Cardiovascular (CV) disease is the main cause of mortality in rheumatoid arthritis (RA).¹ Studies showed that periodontitis is associated with RA and CV diseases.²⁻⁴ Endothelial dysfunction is the first step in the pathogenesis of atherosclerosis. E-selectin is a marker of endothelial dysfunction and was expressed specifically in endothelial cells. To date, there is no study on the effect of periodontal treatment on endothelial dysfunction in RA patients.

Objectives: To determine the effect of periodontal treatment on E-selectin level in RA patients.

Methods: This was a clinical trial in RA patients visiting Rheumatology Clinic in our hospital between March-May 2017. Inclusion criteria: adult RA patients, has periodontitis, low-high RA disease activity, RA duration of 10 years or less, has received DMARD. Exclusion criteria: subjects who smoke, have diabetes, underwent dental treatment for the past 3 months, have other autoimmune diseases, and patients who refused to join the study. Subjects was randomized into intervention group (periodontal scaling for 1 month) and control group. Study flow is visualized in figure 1. E-selectin level was measured at the start and at the end of the study. T-test was used to measure the difference of E-selectin level changes before-after study between groups.

Results: There were 31 subjects who completed the study. The prevalence of periodontitis was 64.5%. There was no statistically significant difference on delta E-selectin before-after treatment between both groups (table 1). We further divided the subjects based on disease activity and lipid profile at the end of the study. Subjects on the treatment group who was on remission and has normal lipid profile (normal LDL and decreased total cholesterol/HDL ratio) has decreased E-selectin level compared to other subjects.

Table 1 Study subjects and intervention

Characteristics	Total (n = 31)	Intervention group (n = 17)	Control group (n = 14)
Age (years, mean±SD)	55,4±8,8	52,6±9,6	58,9±6,4
RA duration (months, mean±SD)	68,8±36,5	57,8±36,5	83,5±32,3
Disease activity(n, %)	16	10 (58,3%)	6 (37,5%)
- Low	(53,3%)	6 (35,3%)	8 (53,8%)
- Moderate	14	1 (3,3%)	0 (0%)
- High	(43,3%)		
Taking glucocorticoid (n, %)	20	12 (70,6%)	8 (57,1%)
	(64,5%)		
BMI (kg/m ² , mean±SD)	24,9±3,17	24,89±3,47	24,92±2,86
Oral Hygiene Index (median, min-max)	0,85 (0,14 - 3,2)	0,8 (0,14 - 2)	0,82 (0,2 - 3,2)
Delta of E-selectin level start-end of study (ng/mL, mean±SD)	-	-6,3±9,3	-2,7±9,7 (p value 0,303)

Conclusions: Periodontal treatment for a month has no effect on E-selectin level in RA patients. Further studies on the effect of periodontal treatment on endothelial dysfunction in RA patient needs to be done on patients on remission, without dyslipidemia, and with longer treatment period.

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SAT0161

INFLUENCE OF DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS ON RADIOGRAPHIC PROGRESSION OF CONCOMITANT INTERPHALANGEAL JOINT OSTEOARTHRITIS

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Background: The role of inflammation in distal interphalangeal (DIP) osteoarthritis (OA) is not clear. Unlike the situation in psoriatic arthritis, DIP joints are considered not to be affected in rheumatoid arthritis (RA). Despite synovitis and bone marrow edema are also associated with radiographic progression of hand OA, the radiological course of DIP-OA and joints affected from RA differ substantially.

Objectives: To clarify the influence of RA disease activity and bone erosions on radiologic progression of DIP joint OA.

Methods: In sequential radiographs of 1988 RA patients available within the Swiss rheumatic disease registry (SCQM), we scored 15904 DIP joints for the presence of erosions as well as the severity of osteophytes, subchondral sclerosis and joint space narrowing according to the modified Kellgren Lawrence Grade (KLG). Progression was defined as an increase of KLG.

Results: The mean patient age was 56.1 years (SD 11.1). The median follow-up time was 4.5 years (IQR 3.1 – 7.0). DIP-OA was present in 60% of patients at baseline. Age, female sex and higher body mass index but not anti-citrullinated protein antibodies or rheumatoid factors were associated with the presence of DIP-OA. Preexisting DIP-OA (odds ratio [OR] 4.7, p<0.001) and female sex (OR 1.4, p=0.009) were predictors for radiologic progression, whilst metacarpophalangeal joint erosions or DAS28-ESR had no influence on the radiological course of DIP-OA.

Conclusions: Known risk factors for DIP-OA are replicated in patients with RA. RA disease activity, autoantibody status or metacarpophalangeal joint erosions where not associated with DIP-OA presence or progression, indicating distinct roles of inflammation in the pathogenesis of RA and OA.

Disclosure of Interest: None declared

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SAT0162

WHERE SHOULD WE SEEK FOR SUBCLINICAL SYNOVITIS USING ULTRASOUND IN RHEUMATOID ARTHRITIS?

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Background: The role of ultrasound imaging (US) in rheumatoid arthritis (RA) management is fundamental by sharpen diagnosis, predicting prognosis, monitoring disease activity and identifying remission. The detection of subclinical synovitis and articular inflammatory changes represent the real advantages of this technology. However, joint US is time-consuming, thus identifying the area of sub-clinical synovitis should be useful to overcome this difficulty.

Objectives: We aimed to assess the most profitable joint locations in detecting subclinical synovitis in RA.

Methods: We performed a cross-sectional study of one hundred patients with inflammatory joint pain or synovitis for more than 6 weeks and less than 2 years. All patients were free of conventional or biological DMARD's at inclusion. An experienced radiologist performed the MSUS scan of 22 joints (2 wrists, 10 metacarpophalangeal joints MCP and 10 proximal interphalangeal joints PIP) unaware of clinical and biological findings. MSUS was performed using a Philips HD11. The used frequency ranged from 15 to 17 MHz and we used a Power Doppler (PD). After US assessment, patients were classified as having RA according to ACR/EULAR 2010 criteria.

Results: We enrolled 100 patients (77 women and 23 men) with a mean age of 51.8 years [16-77]. Fifty-five patients (55%) fulfilled the ACR/EULAR 2010 criteria for the diagnosis of RA. The mean disease duration was 10.96 months [2-24]. Rheumatoid factor and ACPA were positive in 53% and 25% cases respectively. The mean disease activity score at the time of study was 5.36 [1.36-8.61]. A clinical wrist synovitis was found in 92 cases (46%). In the 54 wrists with no clinical