traditional and non-traditional CVD risk factors. In general population, hypothyroidism had been reported as a CVD risk factor.

Objectives: This study aimed for the first time to investigating the relationship between thyroid function parameters and the CVD risk as manifested by the carotid intima media thickness (cIMT) among RA patients.

Methods: All the RA patients were recruited through a specialized rheumatology clinic at the Ministry of Health and Prevention of UAE, from April 2016 to December 2018. Fasting Free thyroxine (FT4), Free triiodothyronine (FT3), and thyroid stimulating hormone (TSH) were assessed in all the participants within the same week of the cIMT measurement. Linear regression analysis used to look for the correlation of the thyroid function test (TSH, T₄, and T₃) and the cIMT.

Results: A total of 154 female RA patients satisfying ACR/EULAR criteria for diagnosis of RA were recruited. None of the patients had history of thyroid, renal, or hepatic disorders. None of the patients were pregnant. The mean age for the participants was 50 ± 12 years (Min16 –Max 87). The mean FT4 was 15.7 ± 3.6 (NR: 12-22 pmol/L), mean FT3 was 4.54 ± 1.0 (NR: 4-6.8 pmol/L), and mean TSH was 2.60 ± 3.3 (NR:0.27-4.2 mIU/L). The mean cIMT was 0.57±0.11 mm. correlating TFT with cIMT showed that while there was no correlation between each of the FT3 and FT4with the cIMT (P value 0.46 and 0.19, respectively), there were a significant negative linear relationship between TSH value and the cIMT (P=0.03, β= -0.006).

Conclusion: Subclinical thyroid dysfunction might be an additional non-traditional CVD risk factors that can help in filling the gap of understanding the increased risk of CVD in RA. Further studies at a larger scale are needed to confirm the study findings. Also, there is a need to confirm if management of thyroid dysfunction in RA may help in overall improvement of this subset of population.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3905

THU0138

RHEUMATOLOGISTS' ADHERENCE TO THE TREAT-TO-TARGET PRINCIPLE IN EARLY RA PATIENTS WITHIN THE PRAGMATIC CARERA TRIAL: ROOM FOR IMPROVEMENT?

Veerle Stouten¹, Diederik De Cock¹, Sofia Pazmino¹, Kristien Van der Elst^{1,2}, Johan Joly², Delphine Bertrand^{1,2}, Rene Westhovens^{1,2}, Patrick Verschueren^{1,2}, On behalf of the CareRA study group. ¹KU Leuven, Skeletal Biology and Engineering Research Center, Department of Development and Regeneration, Leuven, Belgium; ²University Hospitals Leuven, Rheumatology, Leuven, Belgium

Background: Treating to a predefined target is a principle adopted in guidelines to treat rheumatoid arthritis (RA). It is currently the most efficient strategy to control disease activity, but its implementation in daily clinical practice remains challenging.

Objectives: To evaluate rheumatologists' adherence to a treat-to-target (T2T) approach at a threshold of low disease activity (DAS28CRP≤3.2) in patients with early RA during the 2-year Care in early RA (CareRA) study.

Methods: CareRA is an investigator-initiated pragmatic multicentre trial, in which patients with early RA and naïve to conventional synthetic disease modifying anti-rheumatic drugs (csDMARD) were included (n=379). Participants were randomized to different remission induction schemes consisting of a csDMARD combination or methotrexate (MTX) monotherapy with and without a prednisone tapering down scheme. Following the T2T approach, specific treatment adaptations had to be performed in case of DAS28CRP>3.2 during the first study year, unless a predefined reason not to intensify treatment was provided. As first step, dose of MTX had to be increased from 15mg to 20mg weekly. As second step, dose of the other csDMARD was escalated in the combination arms and leflunomide was added in the MTX monotherapy arms. From week (w)52 onwards, further T2T was advised but type of treatment adaptation was left at the rheumatologists' discretion. Adherence to this T2T approach

Table 1. Lipid profile in RA patient with and without IR

Lipid parameters	1 group IR (+) (n=15)	2 group IR(-) (n=32)	p
TC, mmol/l	5,5 [4,8;6,5]	5,2 [4,3;5,8]	0,16
HDL-C, mmol/l	1,7 [1,3;1,9]	1,7 [1,6;2,1]	0,25
LDL-C, mmol/l	3,4 [2,5;4,2]	2,9 [2,1;3,5]	0,12
TG, mmol/l	1,3 [0,8;2,2]	0,9 [0,7;1,1]	0,007
Non-HDL, mmol/l	4,0 [2,9;4,9]	3,2 [2,6;3,8]	0,09
TG/HDL-C ratio	0,8 [0,5;1,3]	0,5 [0,4;0,7]	0,01

was defined as performing a dose escalation or changing/adding DMARD medication in case of DAS28CRP>3.2 and was evaluated at every study visit during 2 years. Additionally, remission (DAS28CRP<2.6) rates at w104 were compared between patients in which T2T was applied at every visit and patients not always treated to target. Only data from patients for which DAS28-CRP scores were available were taken into account to evaluate the low disease activity state.

Results: The proportion of patients with DAS28CRP>3.2 was 26% (93/365) at w8, but decreased to a stable average of 16% on the following visits and further diminished to 10% (30/303) at w104. The frequency of T2T adherence in these patients varied from 59% (55/93) at w8 to 17% (5/30) at w104 (Figure 1). The most frequent reason not to intensify treatment during the first study year was that rheumatologists considered the disease already well-controlled. This reason was reported in 50% of non-adherent cases at w8, in 15% at w16, 14% at w28, and 24% at w40. The second most frequently given reason for non-adherence during the first study year was that giving glucocorticoids or NSAIDs temporarily was preferred over changing DMARDs, as reported in 3% of cases at w8, 15% at w16, 27% at w28, and 35% at w40. T2T was applied at all visits in 41 out of 110 (37%) patients needing at least 1 adaptation during the 2-year trial. Of these 41 patients, 36 (88%) were in remission at w104, while of the 69 patients not always treated to the T2T principle, 40 (58%) were in remission at the end of the 2-year trial (p=0.001).

Conclusion: This study shows the difficulty of applying T2T strictly, both with and without a fixed protocol to follow. In less than half of patients theoretically in need of a treatment adaptation, treatment was intensified at all visits during the first 2 years of treatment. In the majority of cases rheumatologists gave as reason for overruling the T2T guidance that they estimated disease activity to be sufficiently controlled. However, patients in which the T2T principle was applied strictly, showed higher remission rates after 2 years of treatment.

Abstract THU0138 – Figure 1

Disclosure of Interests: Veerle Stouten: None declared, Diederik De Cock: None declared, Sofia Pazmino: None declared, Kristien Van der Elst: None declared, Johan Joly: None declared, Delphine Bertrand: None declared, Rene Westhovens: Grant/research support from: Bristol-Myers Squibb, Consultant for: Celltrion, Galapagos-Gilead, Patrick Verschueren: Grant/research support from: Unrestricted Pfizer Grant for Early RA research

DOI: 10.1136/annrheumdis-2019-eular.7239

THU0139

IS ADDING ANTI-CARP OR ANTI-PAD14 BENEFICIAL FOR DIAGNOSIS OF RHEUMATOID ARTHRITIS?

Bogdan Kolarz¹, Magdalena Dryglewska², Marek Ciesla¹, Maria Majdan².

¹University of Rzeszow, Faculty of Medicine, Rzeszow, Poland; ²Medical University of Lublin, Department of Rheumatology and Connective Tissue Diseases, Lublin, Poland

Background: Post-translatory modification (PTM), such as protein citrullination or homocitrullination (carbamylation) are key issues for the development of RA. There are known more than 300 PTMs. Some of them such as homocitrullination, are of chemical origin, but most of them (over 200) are of enzymatic origin. ACPA, anti-PAD14, anti-CarP and indirectly

RF are originated as a result of such post-translational modifications [1]. From the above-mentioned RA markers only synthesis of anti-CarP is a result of chemical protein modification. The synthesis of anti-PADI4 may facilitate the production of citrullinated proteins and contribute to the formation of ACPA. All of the above markers appear before RA onset [2].

Objectives: The aim of our study is to discover the potential utility of using additional markers (anti-CarP and anti-PADI4) in RA diagnosis.

Methods: 121 RA patients, 82.4% female, aged 52.2±12.3 years (mean ±SD) and 30 healthy controls (HC), 76.7% female, aged 53.2±8.1 years, were enrolled in the study. ACPA, RF, anti-CarP and anti-PADI4 antibodies were determined in serum by enzyme-linked immunosorbent immunoassay (ELISA).

Results: The markers positivity rate was 85.95%, 67%, 55.37% and 46.28% in ACPA, RF, anti-PADI4 and anti-CarP respectively. Among ACPA negative patients we found 44.44% and 16.67% anti-CarP and anti-PADI4 positive results respectively. The data concerning ACPA are gathered in Table 1.

RA patients, n=121		
RA markers positivity	ACPA(+), n=103 (85,95%)	ACPA(-), n=18 (14,88%)
Anti-CarP(+)	48 (46,6%)	8 (44,44%)
RF(+)	77 (74,76%)	4 (22,22%)
Anti-PADI4(+)	64 (62,14%)	3 (16,67%)
Anti-CarP(+) and RF(+)	41 (39,81%)	3 (16,67%)
Anti-CarP(+) and anti-PADI4(+)	33 (32,04%)	1 (5,56%)
RF(+) and anti-PADI4(+)	54 (52,43%)	2 (11,11%)
Anti-CarP(+) and RF(+) and anti-PADI4(+)	30 (29,13%)	1 (5,56%)

Table 1. The profile of anti-CarP, RF, anti-PADI4 positivity in ACPA(+) and ACPA(-) RA patients.

In HC group we found 0%, 0%, 7.14% and 7.14% positivity in ACPA, RF, anti-PADI4 and anti-CarP respectively. We found 91.7% positivity for ACPA(+) or anti-CarP (+) vs 88.4% for ACPA(+) or RF(+).

Conclusion: The measurement of anti-CarP antibodies may be useful in RA diagnosis. The positivity for ACPA/anti-CarP is even higher than ACPA/RF. This might be caused by the similarity of the origins of ACPA and RF (enzymatic citrullination), while anti-CarP origin is different (chemical carbamylation). It is known that anti-CarP appears years before RA onset and might be used as a potential biomarker for pre-RA diagnosis. We didn't confirmed the usefulness of anti-PADI4 as RA biomarker.

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Disclosure of Interests: Bogdan Kolarz: None declared, Magdalena Dryglewska: None declared, Marek Cieśla: None declared, Maria Majdan Speakers bureau: MSD, UCB, Abbvie, Roche

DOI: 10.1136/annrheumdis-2019-eular.2117

THU0140

INSULIN RESISTANCE AND LIPID PROFILE IN RHEUMATOID ARTHRITIS PATIENTS WITHOUT DIABETES MELLITUS OR FASTING HYPERGLYCEMIA

Liubov Kondratyeva, Tatiana Popkova, Evgeny Nasonov. V.A.Nasonova Research Institute of Rheumatology, Moscow, Russian Federation

Background: Diabetes mellitus (DM) is known to be associated with proatherogenic lipid profile and cardiovascular complications. Insulin resistance (IR) is the major pathophysiological mechanism contributing to type II DM development. Established in general population correlation between IR and dyslipidemia sometimes even without DM, should nevertheless be confirmed in patients (pts) with rheumatoid arthritis (RA).

Objectives: To analyze IR rates and identify IR predictive lipid profile in RA patients without DM or hyperglycemia.

Methods: Totally 47 RA pts (41 women, 6 men, 56 [39; 62] years old) without established DM and with normal fasting glucose levels (<6.1 mmol/l) were enrolled in the study. Median disease duration was 6 [5;14] years. The majority of pts were IgM RF (83%) and anti-CCP (83%) seropositive, had low (40,4%) or moderate (42,6%) RA activity based on

DAS28-ESR scores. RA pts were treated with glucocorticoids (51,1%), methotrexate (57,4%) or other disease-modifying antirheumatic drugs (23,4%), biological agents (17,0%) and statins (10,6%). IR was defined as Homeostasis Model Assessment of Insulin Resistance (HOMA-IR) index $\geq 2,77$. Lipid profile included evaluation of the following parameters: serum levels of total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C) and triglycerides (TG). Additionally, non-HDL-C = TC - HDL-C and TG/HDL-C ratio were also evaluated.

Results: Median HOMA-IR levels were 1,7 [1,1;3,2]. HOMA-IR index correlates with age ($r=0,3$, $p=0,04$), body mass index ($r=0,6$, $p<0,001$), waist circumference ($r=0,6$, $p<0,001$), TC ($r=0,3$, $p=0,02$), non-HDL ($r=0,3$, $p=0,03$), TG concentrations ($r=0,5$, $p<0,001$) and TG/HDL-C ratio ($r=0,4$, $p=0,006$). IR was detected in 15 (31,9%) RA pts. RA pts with (group 1, $n=15$) or without IR (group 2, $n=32$) were comparable in terms of age, sex, disease duration and activity, therapy, and comorbidities including arterial hypertension, myocardial infarction + coronary revascularization. Hypertriglyceridemia ($\geq 1,7$ mmol/l) was more often present in pts with IR compared to pts without IR (33,3% vs 6,3%, $p=0,03$).

Conclusion: More than 30% of RA pts without DM and with normal serum fasting glucose concentration had IR. The IR was associated with increased TG levels and elevated TG/HDL-C ratio in RA pts. This proatherogenic lipid profile could be responsible for earlier development of cardiovascular complications.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3015

THU0141

SEVERELY DESTRUCTIVE UNILATERAL WRIST ARTHRITIS AS A RARE MANIFESTATION IN PATIENTS WITH RHEUMATOID ARTHRITIS – ANALYSIS OF CLINICAL AND IMAGING FEATURES AT A SINGLE CENTER

Viktor Korendovych^{1,1}, Radovan Vasko¹, Elena Nikiforou², Jan-Gerd Rademacher¹, Gerhard A Müller¹, Peter Korsten¹. ¹University Medical Center Göttingen, Department of Nephrology and Rheumatology, Göttingen, Germany; ²Whittington Hospital, London, United Kingdom

Background: Rheumatoid arthritis (RA) is characterized by symmetrical involvement of small and large joints. New treatment modalities have not only allowed to achieve clinical remission or low disease activity, but also to halt the radiographic progression of joint destruction. In some patients, the disease progresses and leads to joint destruction despite treatment with disease-modifying antirheumatic drugs (DMARDs). Occasionally, wrist arthritis leads to severe destruction of carpal bones with ankyloses, so-called "os carpal". Severely destructive wrist arthritis in an asymmetrical, unilateral pattern has only rarely been reported in the literature and has not been systematically assessed (1). A severely destructive yet often symmetrical arthritis has been described in seronegative RA patients (2).

Objectives: To systematically analyze the presence of severely destructive unilateral wrist arthritis in a single-center, seropositive RA population and to identify risk factors for its development.

Methods: This is a single-center retrospective cohort study using routine clinical data. We performed a database search of our RA population for the presence of rheumatoid factor (RF) and/or anti-CCP antibodies (ACPA) from 2011 to 2017. Radiographs were assessed independently by two investigators for the presence of severely destructive unilateral wrist arthritis. Discrepancies were resolved by discussion. Epidemiological data including age, gender, disease duration, occupation, dexterity and smoking status were recorded. Patients with psoriasis, a family history of psoriasis or posttraumatic osteoarthritis were excluded. Past and current treatments were recorded. Conventional radiographs of the hands were scored using the modified Sharp score, magnetic resonance images were examined if available.

Results: We identified 1247 patients with either positive RF, ACPA, or both. After exclusion of non-RA diagnoses and radiograph review, 17 eligible patients were included in the study. Of these, 7 were excluded because of incomplete clinical data. All of the remaining ten patients were female (100%). Median age was 58.1 years (33-70), median disease duration was 15.5 years (1-22). Seven patients were right-handed, one was left-handed, in two patients, dexterity was not known. Six patients were smokers, two patients were non-smokers, in two patients, smoking status was not known. Median ACPA levels were 134,6 IU/ml (normal range <5), median RF 54,2 IU/mL (NR <16). All but two patients were positive for both antibodies; in three patients, ACPA were only mildly elevated (6, 11, and 14, respectively). 6/8 (75%) patients with severe destruction were smokers. In 5/7 (71.4%) right-handed patients, destruction occurred in the dominant wrist, whereas in 2/7 (28.5%) right-