FRI0060 ARE OLDER RA PATIENTS FRAIL, OR LONELY AND DEPRESSED?

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Background: The average rheumatoid arthritis (RA) patient has approximately 2 comorbidities, and this number increases with age. Both comorbidity and ageing are considered risk factors for frailty, a physiological syndrome characterised by reduced functional reserves and resistance to 'stressors' due to a cumulative decline of physiological and psychosocial systems. Frailty results in adverse health outcomes including hospitalisation and increased risk of mortality. The extent to which frailty is a relevant problem in elderly RA patients remains unknown.
Objectives: (1) To assess the prevalence of frailty and (2) to identify which factors are associated with frailty in elderly patients with RA.
Methods: Consecutive patients of the outpatient clinic where invited to participate in a study on ageing while ensuring equal representation of patients in three predefined age groups: 55–64, 65–74, and ≥75 years. Rheumatologists recorded the number of comorbidities. Patients rated their overall health on a visual analogue scale (0–100; 100 very bad health) and completed the validated Groningen Frailty Indicator (GFI), which contains 15 questions on the loss of functions and resources across 4 domains: physical (mobility functions, multiple health problems, physical fatigue, vision, hearing), cognitive (cognitive dysfunction), social (emotional isolation), and psychological (depressed mood and feelings of anxiety). Scores on items are dichotomized, "1"; indicating a problem or dependency. Prevalence of problems/dependency was compared among the 3 age-groups using a Kruskal-Wallis test. Characteristics of patients classified as frail (GFI score ≥4) or non-frail (GFI score <4) were compared using a chi-square test for categorical data or the independent samples t-test for continuous data.
Results: The prevalence of frailty across age groups was respectively 43.3%. 40.0% and 43.4%. Frail RA patients were more often female, had a lower subjective health status. Remarkable, patients classified as frail identified problems in the social and psychosocial domains. Of interest, there were no differences regarding age, polypharmacy, number of comorbidities, and cognitive domain (figure 1).

Table 1 Comparison of demographics, clinical characteristics, and number of patients with problems/dependency per frailty domain between frail and non-frail elderly rheumatoid arthritis patients.

	Frail (n=38)	Non-frail (n=52)	p-value
DEMOGRAPHICAL CHARACTERISTICS			
Male	8 (21)	22 (42)	0.035
Age, mean (SD)	69.9 (9)	69.6 (7)	0.878
CLINICAL CHARACTERISTICS			
Patient global health (0-100), mean (SD)	45.7 (20)	34.5 (16)	0.004
Comorbidities, mean number (SD)	0.6 (1)	0.5 (1)	0.862
FRAILTY DOMAIN SCORES			
Physical domain GFI; problem or dependency: n (%)			
Grocery shopping	5 (13)	2 (4)	0.103
Walk outside the house	3 (8)	0 (0)	0.039
Getting (un)dressed	2 (5)	0 (0)	0.094
Visiting restroom	1 (3)	0 (0)	0.239
Vision	5 (13)	2 (4)	0.103
Hearing	6 (16)	6 (12)	0.558
Nutrition	6 (16)	1 (2)	0.015
Use of 4≥ medication types	30 (79)	38 (73)	0.522
Subjective physical fitness	23 (61)	13 (25)	0.001
Cognitive domain GFI; problem or dependency: n (%)			
Memory complaints	10 (26)	6 (12)	0.070
Social domain GFI; problem or dependency: n (%)			
Emptiness	24 (63)	2 (4)	<0.001
Missing the presence of people around	25 (66)	4 (8)	<0.001
Feelings of loneliness	21 (55)	0 (0)	<0.001
Psychosocial domain GFI; problem or dependency: n (%)			
Feelings of depression	28 (74)	6 (12)	<0.001
Nervous or anxious feelings	22 (58)	8 (15)	<0.001

Data are presented as number (percentage) of patients unless stated otherwise.

Conclusions: Using validated questionnaires, frailty is highly prevalent in all RA patients older than 55 years and seems to be a distinctive health construct which is not necessarily related to increasing age, polypharmacy and comorbidity in patients with RA. An alternative explanation of our findings is that rheumatologists seem to miss symptoms of depression and loneliness among RA patients.
Disclosure of Interest: None declared
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FRI0061 CARDIOVASCULAR RISK FACTOR AND DISEASE BURDEN IN BELGIAN PATIENTS WITH RHEUMATIC AND MUSCULOSKELETAL DISEASES OF NORTH AFRICAN COMPARED TO EUROPEAN DESCENT

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Background: Patients with rheumatic and musculoskeletal diseases (RMDs) from developed populations often experience increased atherosclerotic cardiovascular disease (ACVD) risk. In European countries, increasing proportions of inhabitants originate in developing countries and are therefore reportedly at an earlier epidemiological transition stage, which is associated with reduced ACVD.[1]
Objectives: This study aimed to determine whether population origin specific cardiovascular risk management is indicated in Belgian patients with RMDs.
Methods: We recorded major conventional cardiovascular risk factors included in the Systematic Coronary Risk Evaluation (SCORE) or/and Framingham score equation, other conventional and non-conventional cardiovascular risk factor profiles and the prevalence of subclinical ACVD comprising arterial stiffness (pulse pressure >60 mmHg) and established ACVD (coronary artery disease, ischaemic cerebrovascular disease or/and peripheral artery disease) in 673 consecutive patients with RMDs; 126 and 547 were of North-African and European ancestry, respectively. Cardiovascular risk factors and disease were compared between patients of North African and European descent in multivariable logistic and linear regression models.
Results: Patients of North African descent tended to have less frequently inflammatory RMDs (OR (95% CI)=0.69 (0.45–1.04)) including rheumatoid arthritis (RA) (OR (95% CI)=0.46 (0.19–1.09)), and had more often fibromyalgia (OR (95% CI)=2.93 (1.84–4.65)). Patients of North African descent were younger than their European descent counterparts (mean (SD)=47.5 (14.7) vs 55.7 (16.5) years, p<0.0001). In age, sex and inflammatory RMD adjusted analysis, North African descent patients had less prevalent hypertension (OR (95% CI)=0.54 (0.33–0.87)) and more frequent diabetes (OR (95% CI)=3.69 (2.00–6.80)); North African descent patients exercised ((OR (95% CI)=0.34 (0.20–0.57)) and used alcohol (OR (95% CI)=0.05 (0.02–0.12)) less often, and had a less frequent family history of ACVD (OR (95% CI)=0.64 (0.41–0.99)), smaller body height (mean (SD)=1.64 (0.09) vs 1.66 (0.11) m, p<0.0001) and larger the Arthritis Impact Measurement Scales Depression score (mean (SD)=4.4 (1.9) vs 3.7 (2.0), p=0.009). These findings translated into a frequencies of having ≥1 major cardiovascular risk factor, overall 10 year high risk for any (Framingham score ≥20) and fatal (SCORE ≥5) ACVD, and prevalence of subclinical and established ACVD that were as large in RMD patients from North African compared to European descent. European League Against Rheumatism multiplier[2] application in patients with RA did not alter these findings.
Conclusions: Consistent disparities exist in ACVD risk factor profiles between RMD patients of North-African and European descent. However, the overall cardiovascular risk factor and disease burden is currently as large in RMD patients of North African compared to European ancestry. Adequate ACVD risk management in RMD patients should be performed irrespective of population origin.

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FRI0062 CORTICOSTEROID INJECTION FOR PLANTAR HEEL PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Plantar heel pain is one of the most common conditions affecting the foot in adults, with prevalence estimates between 4% and 7%.[1,2] Corticosteroid injection is a common intervention used to treat plantar heel pain,[3] however there is limited high quality evidence to support this practise. Because corticosteroid injection is frequently used for plantar heel pain, it is important that health professionals understand whether the evidence-base supports the use of this intervention.

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Objectives: To conduct a systematic review and meta-analysis of the effectiveness of corticosteroid injection for pain and function in people with plantar heel pain.
Methods: Databases searched include Medline, CINAHL, SPORTDiscus, Embase and the Cochrane Library. Included studies had to be randomised trials that evaluated the effectiveness of corticosteroid injection on pain or function for plantar heel pain. The primary outcomes were pain (including 'first step' pain) and function, categorised as short (0 to 6 weeks), medium (7 to 12 weeks) or longer term (13 to 52 weeks). A secondary outcome was plantar fascia thickness. Mean differences or standardised mean differences and 95% confidence intervals were calculated. The Cochrane Collaboration tool for assessing risk of bias was used to assess trial quality, and the GRADE approach was used to assess the strength of evidence.
Results: A total of 37 trials (2200 participants) were included. In the short term, corticosteroid injection was more effective for reducing pain than autologous blood injection (SMD −0.56 [-0.86,–0.26]) and orthotic devices (SMD −1.20 [-2.30,–0.11]). There were no significant findings in the medium term. In the longer term, corticosteroid injection was less effective than platelet-rich plasma injection (SMD 0.87 [0.30, 1.45]). For function, corticosteroid injection was more effective than physical therapy in the short term only (SMD −0.69 [-1.31,–0.07]). Notably, corticosteroid injection was not more effective than placebo injection for reducing pain in the short (SMD −0.98 [-2.06, 0.11]) and medium (SMD −0.86 [-1.90, 0.19]) terms. When trials considered to have high risk of bias were excluded, there were no significant findings.
Conclusions: Our review found that corticosteroid injection is more effective for reducing pain than some comparators, and more effective for improving function than physical therapy in the short term. Corticosteroid injection is more effective than platelet-rich plasma injection in the longer term. Corticosteroid injection is *not* more effective than placebo injection for reducing pain or improving function.

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FRI0063 RAPAMYCIN INDUCES REMISSION IN PATIENTS WITH REFRACTORY RHEUMATOID ARTHRITIS

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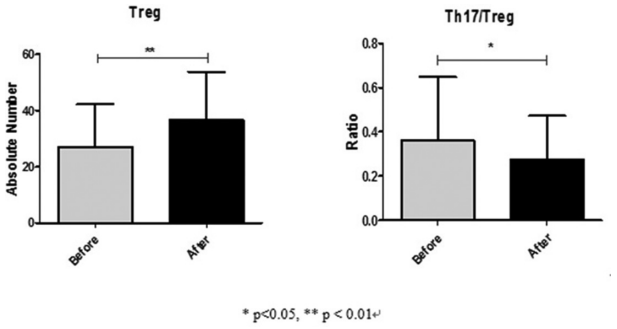
Background: Rheumatoid arthritis (RA) is a chronic inflammatory disease that results in destruction of joint cartilage and bone. However, many patients do not achieve satisfactory disease control by current therapy with high risk of adverse reactions. We have reported that absolute number of peripheral regulatory T (Treg) cells reduced in RA patients (EULAR Abstract). Moreover, rapamycin has been reported to inhibit differentiation of Th17 and promote growth of FoxP3 +Treg cells by inhibiting mTOR pathway [1].
Objectives: To observe the therapeutic efficacy of rapamycin on the reduction of disease activity, increase in Tregs and decrease in Th17 to restore balance of Th17/Treg cells in RA patients with high disease activity (DAS28 ≥2.6).
Methods: Fifty RA patients who treated with two kinds of DMARDs for more than half a year did not achieve remission (DAS28 ≥2.6) were enrolled and were treated with rapamycin at a dose of 0.5 mg every 2 days for 24 weeks. The absolute number of CD4 +T cell subsets in peripheral blood from these patients were assessed by flow cytometry combined with internal standard beads before the treatment as baseline and at week 24 after treatment. Meantime, the DAS28, the dosage of corticosteroids and immunosuppressant were also recorded.
Results: Rapamycin treatment reduced the disease activity and induced remission (DAS28<2.6) in 44.9% of active RA patients. Their DAS28 was reduced from a median 2.9 (at week 0) to 1.9 (at week 24) (P<0.001) and the absolute number of peripheral Treg cells was increased from 27.14±15.11 cells/μl (at week 0) to 36.59±17.23 cells/μl (at week 24) (p=0.002). The ratios of Th17/Treg cells also had a significant decrease from 0.36±0.29 at baseline to 0.27±0.20 at week 24 (P<0.041). In contrast, the decrease in the absolute number of Th17 cells was not statistically significant (p=0.846). After the treatment, the proportion of patients taking glucocorticoids decreased from 66.0% to 64.0% and the mean dosage of prednisone decreased from 9.89 mg/d to 7.70 mg/d. And the usages of DMARDs were also reduced (P<0.001).



* p<0.05, ** p < 0.01

Conclusions: Rapamycin combined with low level of conventional therapy effectively reduced disease activity and induced remission among RA patients who received long-term conventional treatment without remission (DAS28 ≥2.6) by increasing the absolute number of Treg cells and restoring the balance of Th17 cells and Treg cells. As the research progresses, rapamycin is likely to become a promising therapeutic candidate.

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FRI0064 RIGHT VENTRICLE DIASTOLIC DYSFUNCTION IN EARLY RHEUMATOID ARTHRITIS PATIENTS: RISK FACTORS AND THE EFFECT OF ANTIRHEUMATIC THERAPY

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Objectives: To determine the frequency of diastolic dysfunction of the right ventricle (RVDD) in patients (pts) with early rheumatoid arthritis (RA) prior to therapy with basic anti-inflammatory drugs (DMARDs), examine its relationship with traditional risk factors of cardiovascular disease and markers of inflammation, to study the effect of antirheumatic therapy administered in accordance with "treat to target" (T2T) principles on RVDD in early RA pts during 18 month follow-up.
Methods: A total of 66 pts with early RA (ACR/EULAR criteria, 2010 were included: 71% of women, age $56^{46;61}$ years, disease duration $6^{4;8}$ months; DAS28 5.3 [5.0;6.2], positive for ACCP (100%)/RF (87%), without prior administration of DMARDs and glucocorticoides. All pts underwent blood pressure monitoring (BP), echocardiography, tissue Doppler imaging. Methotrexate (MT) therapy was started in all pts with an escalation of the dose up to 30 mg/week subcutaneously. In case of no remission 3 months later, MT was added with biologic therapy (BT): Adalimumab, Certolizumab pegol, Abatacept, Rituximab. After 18 months 29 (44%) pts achieved remission. Antihypertensive therapy was administered in 51 (77%) pts: ACE inhibitors, ARBs, beta-blockers, calcium antagonists, diuretics.
Results: At baseline RVDD was detected in 16 (24%) pts. RVDD related factors that remained associated on a multivariable forward stepwise linear regression analysis were body mass index (BMI) (β-coefficient (95% CI) 0,3 (-0,003;−0,008), SDAI 0,2 (-0,009;−0,001), carotid atherosclerosis (CA) 0,2 (-0,3;0,01), disease duration 0,2 (-0,02;0,001). Multiple coefficient of determination (R2) was 38% (p=0,03). After 18 months the incidence rate of RVDD decreased from 24% to 18%, p>0.05. The dynamics of diastolic function was multidirectional. RVDD was normalised in 10 (63%) of 16 RA pts with RVDD (p=0.02). All of them had effective control of BP and achieved remission. 67% of pts with normalised RVDD received MT+BT. 5 (31%) pts with new cases of RVDD and 6 pts with preserved RVDD did not reach the target values of BP and RA remission.
Conclusions: Presens of CA, higher BMI, SDAI and disease duration strongly associated with the incidence rate of RVDD. A significant decrease of RVDD in case of achieved targeted BP values and RA remission was observed during 18 month therapy of early RA pts in accordance with "T2T" principles
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