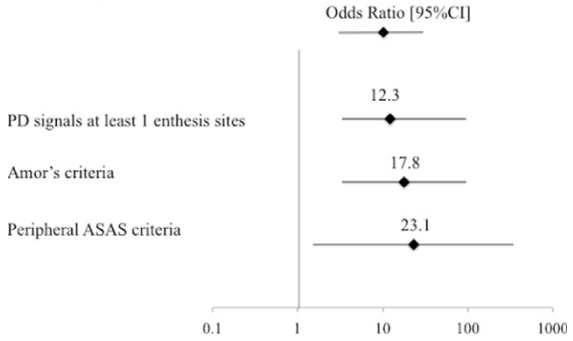
Figure 1. Logistic regression analysis for the contribution of diagnosis of SpA



Conclusions: PD signals of entheses by ultrasound are useful for the diagnosis of SpA with peripheral joint symptoms. In addition to the consideration of axial SpA, the combination use of ultrasound with clinical classification criteria including ASAS and Amor's criteria is beneficial to diagnose peripheral SpA.
Disclosure of Interest: None declared
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SAT0641 THE DIAGNOSTICS OF OSTEOPOROSIS IN MALE REUMATOID PATIENTS

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Background: Rheumatoid arthritis (RA) - chronic immune inflammatory joint disease leading to early disability of patients at high risk for cardiovascular events and osteoporotic fractures. Of particular relevance, this problem becomes in men with RA, due to more frequent severe disease and increased mortality in the year after the fracture. Reduced bone mineral density (BMD) and muscle mass are significant predictors of fracture, which leads to the high importance of studying the state of the IPC and body composition.
Objectives: To improve the diagnosis of osteoporosis in patients with RA male subjects.
Methods: A total of 146 male patients with definite diagnosis of RA at the age of 59 years. Depending on the reception of glucocorticosteroids (GCS) is allocated two subgroups: I subgroup - 40 patients not receiving corticosteroids and II subgroup - 66 patients receiving corticosteroids. The control group consisted of 24 healthy men, matched by age and body mass index. IPC Study in the lumbar spine (L1-L4) and femoral carried out by dual-energy X-ray absorptiometry using osteodensitometry. Evaluation of body composition was carried out with the help of "Pod" program.
Results: In 63% of patients with RA revealed male BMD reduction corresponding to osteopenia/OP (OP was diagnosed in 36 (24.7%) patients with RA, and osteopenia - in 56 (38.4%)). The incidence of OP in the II subgroup was significantly higher ($p<0,05$), than in the I subgroup (48.5% and 5% respectively). The most significant decrease in BMD observed in femoral neck in the study group as a whole, and in individual subgroups. There was a negative correlation between the degree of RA activity and performance of the IPC as a lumbar spine ($r = -0,4$, $p<0.05$), and the proximal femur ($r = -0,38$, $p<0.05$). Evaluation of body composition showed that the treatment group had a significant decrease in total lean mass (TM) body, as well as the trunk and extremities TM compared with those of control group ($p<0,05$). Sarcopenia detected in 80 (55.8%) of RA patients, whereas in the control group it was absent. In 50 (67.6%) of patients with RA male sarcopenia observed to decrease the level of the IPC osteopenia (35.2%) and OD (32.4%). After receiving a negative correlation parameters TM and the absolute 10-year risk of osteoporotic fractures ($r = -0,302$, $p<0,05$) on the FRAX.
Conclusions: 63% of men suffering from RA, observed BMD decrease corresponding OP/osteopenia with a primary decrease in BMD at the femoral neck. Reduced BMD in patients with RA was significantly associated with a high degree of disease activity ($r = -0,4$, $p<0.05$). Receiving corticosteroids had no significant effect on BMD at the femoral neck. Analysis of body composition in 55% of RA patients revealed a decrease in TM limbs to the level of sarcopenia. Received correlation decrease BMD and TM limbs ($p<0,05$; $r =0,28$). Thus, in patients with RA males along with OP/osteopenia revealed a significant decrease in TM, that in view of the biomechanics of the movements may be an additional risk factor for falls and fractures.
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SAT0642 ULTRASONOGRAPHY AND INTRA-ARTICULAR INJECTION THERAPY IN EARLY RHEUMATOID ARTHRITIS: RESULTS FROM THE RANDOMISED ARCTIC TRIAL

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Background: Intra-articular (i.a.) corticosteroid injections are in many countries an integral part of rheumatoid arthritis (RA) treatment. Ultrasonography (US) is increasingly used in the management of RA as a tool to select joints for i.a. injections. How selection of joints based on US information affects distribution of injections has not been previously studied. US can detect joints with subclinical inflammation, however, it is unknown whether there is any added value of injecting these joints.
Objectives: We aimed to explore how US information influences the selection of joints for corticosteroid injection therapy. Additionally, we wanted to examine the efficacy of injecting joints with subclinical inflammation detected by US in terms of reduction of subclinical inflammation and prevention of clinical synovitis.
Methods: In the ARCTIC trial, DMARD-naive RA patients fulfilling the 2010 ACR/EULAR criteria were randomised 1:1 to follow-up with or without US.[1] In both arms the same DMARD treatment strategy was applied, and clinically swollen joints were treated with i.a. steroids when indicated. In the US arm, clinicians could also inject non-swollen joints with PD activity. Patients were assessed at 13 visits during 2 years of follow-up and injections could be performed at all visits. Distribution of injections in patients followed with and without US was assessed. The proportion of patients with any injection was compared between arms using logistic regression, adjusted for gender. In addition, we examined the effect of injections in clinically non-swollen joints with PD $\geq$2 (range 0–3) by comparing clinical joint swelling and estimated mean change in PD activity at the next visit in injected versus non-injected joints. We used logistic and linear mixed model with random intercept by patient in order to adjust for within-patient dependencies.
Results: 230 patients were included (US arm 118, conventional arm 112). Mean (SD) age was 50.6 (13.3)/ 52.3 (14.1) years, 71/51% were females and mean (SD) baseline DAS was 3.5 (1.2)/3.4 (1.2) in the US/conventional arms. [1] More injections occurred in the US arm than in the conventional arm (770 vs 548), especially in intercarpal (58 vs 5) and MTP joints (200 vs 104) (Table 1). In the US arm, 193 joints were clinically non-swollen, but had PD score $\geq$2. Of these, 77 joints were injected. 72/77 injected joints (93.5%) remained non-swollen at next visit compared to 88/116 non-injected joints (75.9%), with an odds ratio of 3.97 (CI: 1.25–12.57, p=0.019, NNT:6). Estimated mean (SE) reduction of PD activity was 2.3 (0.1) compared to 2.0 (0.1) in injected versus non-injected joints ($p<0.001$).

Joint	Number of injections, 0-24 months		Patients with any injection n (%)			
	Ultrasonography N=118	Conventional N=118	Ultrasonography N=118	Conventional N=112	OR (95% CI)	p-value*
DIP 2-5	2	5	2 (1.7)	3 (2.7)	0.62 (0.10-3.93)	0.61
PIP 1-5	74	122	37 (31.4)	36 (32.1)	1.15 (0.65-2.06)	0.63
MCP 1-5	163	113	55 (46.6)	44 (39.3)	1.45 (0.83-2.45)	0.19
Radioulnar	33	9	18 (15.3)	8 (7.1)	2.33 (0.95-5.69)	0.06
Radiocarpal	65	43	39 (33.1)	27 (24.1)	1.66 (0.92-3.03)	0.09
Intercarpal	58	5	33 (28.0)	4 (3.6)	13.38 (4.40-40.75)	**<0.001**
Elbow	15	13	10 (8.5)	9 (8.0)	1.22 (0.46-3.21)	0.90
Shoulder	26	26	14 (11.9)	16 (14.3)	0.78 (0.36-1.72)	0.54
Toes (IP)	7	22	6 (5.1)	13 (11.6)	0.43 (0.15-1.19)	0.10
MTP 1-5	200	104	63 (53.4)	36 (32.1)	2.61 (1.50-4.55)	**0.001**
Ankle	35	35	18 (15.3)	17 (15.2)	1.02 (0.49-2.13)	0.96
Knee	58	31	27 (22.9)	17 (15.2)	1.65 (0.83-3.28)	0.15
Other joints	34	20	14 (12.5)	22 (18.6)	1.59 (0.76-3.35)	0.20
Total	770	548	103 (87.3)	86 (76.8)	2.40 (1.17-4.93)	**0.017**

*Adjusted for gender

Conclusions: Our study shows that follow-up with US may lead to an increased number of joint injections with a different distribution of injected joints compared to follow-up without US. Joints with subclinical inflammation were more likely to remain non-swollen at next visit if injected. However, as the number of joints needed to treat to prevent one swollen joint was six, the clinical relevance of injecting joints with subclinical inflammation may be questionable.
References:
[1] Haavardsholm EA et al., BMJ 2016;354:i4205.
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