removal of DNA-containing immune complexes from blood using composite sorbent. Patent RU2441674 (2010) [in Russian].

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FRI0147 ANTI-MÜLLERIAN HORMONE LEVELS IN FEMALE RHEUMATOID ARTHRITIS PATIENTS TRYING TO CONCEIVE – THE ROLE OF OVARIAN FUNCTION IN TIME TO PREGNANCY IN A NATIONWIDE COHORT STUDY

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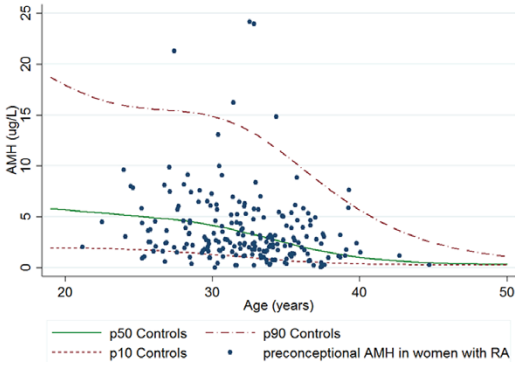
Background: Subfertility, a time to pregnancy (TTP) >12 months, is present in 40% of women with rheumatoid arthritis (RA) actively trying to conceive.[1] Since RA patients appear to reach menopause at a younger age[2], the reduced fertility may be caused by a lower ovarian reserve (OR). Serum anti-Müllerian hormone (AMH) levels are currently the most reliable way to measure the OR.

Objectives: Our objective was to study preconception AMH levels and their association with TTP in women with RA.

Methods: A post-hoc analysis was performed in patients of the Pregnancy-induced Amelioration of RA (PARA) cohort who were visited preconceptionally. Serum AMH levels were measured using the pico AMH ELISA assay (Ansh Labs, Texas, USA), and compared to converted[3] AMH values from a cohort of 554 healthy adult controls[4].

Results: Preconception serum was available in 209 women aged 32.1±3.9 years, of whom 45% were subfertile. The median AMH level was 2.5 ug/L (IQR 1.5–4.6). AMH levels were significantly lower compared to healthy controls ($p<0.001$), with 17.2% (95% CI 10.7 – 23.8%) of patients having levels below the age-specific 10th percentile.

Log-transformed AMH levels were negatively associated with age (-0.070 (95% CI -0.11;-0.031), p=0.001), and with the presence of anti-citrullinated protein antibodies (ACPA) (-0.38 (95% CI -0.71;-0.056), p=0.022). The associations remained significant in the multivariable analyses. AMH levels showed no significant association with TTP (HR 1.09 (95% CI 0.94;1.27), p=0.26).



Conclusions: Women with RA have lower AMH levels than healthy controls. Reduced AMH levels were more pronounced in ACPA positive patients, suggesting that the OR may be compromised more strongly in patients with a more severe disease. However, since preconception AMH levels were not associated with TTP, the reduced levels do not explain the reduced fertility in women with RA.

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FRI0148 THE EFFECT OF TNF INHIBITORS, METHOTREXATE (MTX), AND THE OTHER DMARDS THERAPIES ON DIABETIC CONTROL IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA): TREATMENT WITH MTX ALONE IMPROVED DIABETES CONTROL MORE THAN TNF INHIBITORS PLUS MTX

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Background: It has been shown that inflammation directly influences insulin and glucose metabolism through cytokines such as TNFα and IL-6. It has also been reported that certain RA drugs such as TNF inhibitors, hydroxychloroquine, and MTX were associated with lower diabetes risk among people with RA, but it is still clinically unknown. On the other hand, it has been shown that MTX is involved in activation of intracellular AMP-kinase and promotes glucose uptake in skeletal muscle (Diabetes, 2015).

Objectives: We examined medical records of patients with new RA patients complicated with glucose intolerance to measure in HbA1c, body weight, and DAS28-ESR for 6 and 12 months treated with TNF inhibitors, MTX, and the other DMARDs.

Methods: Newly registered 20 RA patients complicated with glucose intolerance (HbA1c ≥5.6%) at our hospital from May 2013 to December 2015, have treated with as follows; Treatment with infliximab (1 case), golimumab (3 cases), and etanercept (2 cases) in combination with 4–12mg/week of MTX (group A: 6 cases, TNF inhibitors + MTX), MTX (4–10 mg/week) alone (group B: 8 cases MTX alone). The other DMARDs (group C: 6 cases, the other DMARDs including bucillamine (BCL) + salazosulfapyridine (SASP) + tacrolimus (TAC); 1case, BCL+SASP; 1case, BCL alone; 2 cases and SASP alone; 2 cases) had been registered. We have compared the changes of HbA1c levels, body weight, DAS 28-ESR from the beginning of the treatments and 6 and 12 months later. RA patients treated with glucocorticoid were excluded. Diabetic treatment were diet and exercise in all cases, but metformin (500 mg) and DPP4 inhibitor were used in 4 cases (Group A and C). However, each patient in Group B did not use antidiabetic agents. We analyzed these results with paired and unpaired *t* test using JMP12.2.0.

Results: These registered RA patients with female were 60.0%. The mean age were 62.1, 53.5 and 63.8 for group A, B, and C, respectively. There were significant changes in DAS28-ESR after treatment for 6 months in group A and B, respectively ($p<0.01$ in group A and $p<0.05$ in group B).

Groups A and B showed significant improvement of DAS 28-ESR after treatment with 12 months ($P<0.0001$ in group A, $p<0.01$ in group B), but no significant difference of DAS28-ESR in group C was observed. The mean reduction in HbA1c showed a significantly decreases only in the group B ($P<0.01$). There were no significant differences in body weight between the each group, but slightly an increase in body weight was observed in group B. There were no significant correlations between body weight and DAS28-ESR and its changes.

Conclusions: In this study, MTX was thought to contribute not only to suppress chronic inflammation but also to improve the glucose tolerance as compared with TNF inhibitors plus MTX and the other DMARDs. Further studies concerns about the interrelationship between glucose tolerance and RA treatments may require.

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FRI0149 DOES THYROXIN SUBSTITUTION PREDICT NON-RESPONSE TO METHOTREXATE IN EARLY RA?

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Background: Response to treatment varies widely between RA-patients. Our means to predict disease course and treatment response is limited, leading to substantial over- as well as under- treatment. Whereas female gender and smoking have been identified as predictors of non-response, the impact of autoimmune co-morbidities remains largely unknown. Autoimmune thyroid disease (AITD) is one of the most frequent autoimmune diseases in the population. AITD is more prevalent in RA-patients and has also been identified as a risk factor for RA. AITD can be readily identified via thyroxin substitution. We aimed at assessing the impact of prevalent AITD in relation to 3- and 6-month EULAR response to methotrexate in early RA.

Objectives: To investigate whether thyroxin substitution impacts response to methotrexate as the first-line therapy in RA.

Methods: We identified patients with incident RA (symptom duration <1 year), included in the Swedish Rheumatology Quality Register, July 2006 through 2015 (n=7009). All patients starting treatment with methotrexate and who had a follow-up visit at 3 months (n=4364) and/or at 6 months (n=3148) were included. Prevalent AITD was defined as prescription of thyroxin substitution before RA-diagnosis (n=347), based on linkage to the Swedish Prescribed Drug register,