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GENDER AS PROGNOSTIC FACTOR IN RHEUMATOLOGY: CLINICAL RESPONSE TO ANTI-TNF THERAPY

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▶ **Rheumatoid Arthritis (RA) is the most frequent and potentially treatable cause of disability in western countries.**



- ▶ **Autoantibodies, genetic factors, age, gender, lifestyle influence RA prognosis.**
- ▶ **Gender influence both susceptibility to the disease and its course. The disease activity is higher in women than in men. Female had a poorer prognosis and lower response to treatment.**

- 1. Kuiper S, J Rheumatol 2001*
- 2. Tengstrand B, J Rheumatol 2004*
- 3. Forslund K, Ann Rheum Dis 2007*
- 4. Camacho EM, Arthritis Care Res 2011*

Aim of the study

The aim was to investigate the influence of gender in the response to treatment both at 3 and 6 months of follow up in RA patients treated with anti-TNF drugs.

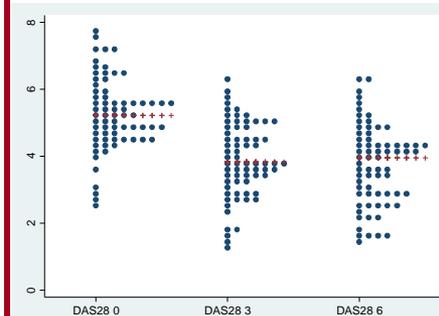
Patients and Methods

- RA consecutive patients (ACR 2010), naïve to treatment with anti-TNF drugs
- At T0 (baseline), T3 (3 months) e a T6 (6 months) from the beginning of antiTNF therapy (adalimumab 40mg sc/2 week or etanercept 50mg sc/week) assessment og:
 - Tender and swollen joints
 - Biochemical parameters (ESR,CRP,Rheumatoid Factors, anti-cyclic citrullinated peptide antibody-ACPA)
 - Clinimetric scores of disease activity (DAS28, CDAI, SDAI,, pain VAS dolore, patient and physician disease activity VAS)

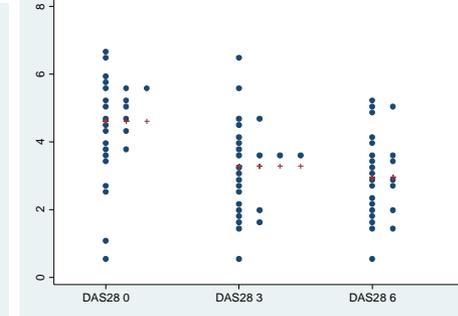
Results

- 94 patients: 69 female (mean age 55.2yrs, range 20-83yrs) e 25 male (mean age 60 yrs, range 38-83yrs)
- 80 etanercept (58 female; 22 male)
- 14 adalimumab (11 female; 3 male)
- DAS 28 statistically significant reduction at 3 and 6 months of follow up (Fig 1a.female; 1b.male)

1a. female



1b. male



Results

Females had higher levels of the following scores than the males:

- **DAS28 at T0, T3, T6**
- **n. tender joints at T0**
- **n. swollen joints at T0**
- **ACPA at T0**
- **n. tender joints at T3**
- **CDAI at T3**
- **n. tender joints at T6**
- **n. swollen joints at T6**
- **CDAI at T6**
- **Patients VAS at T6**

The multivariate analysis highlight the female gender as the only variable associated to DAS 28 statistically significant difference between females and males at T0, T3 and T6.

Conclusions

Women are more susceptible to develop autoimmune diseases, like RA, than men.

Our results show how gender is a possible cause of a different response to treatment with anti-TNF drugs amounting a more severe disease in women.

The reason of these differences is still unknown and probably multifactorial. It More studies have to be performed to understand the underlying mechanisms.