Session type	**LATE BREAKING ABSTRACT SUBMISSION**
Topic	**RHEUMATOID ARTHRITIS**
Presentation preference	**Poster Presentation**
Abstact number	**CORA19-0357**
Abstract title	**Lower education level and reduce fish consumption are associated with higher rheumatoid arthritis disease activity: results from the Tatarstan's women cohort.**

Co-authors M.I. Arleevskaya[1], R.V. Larionova[1], E.A. Takha[1], D.R. Valieva[2], N.D. Shamaev[2], A.R. Valeeva[2], E.A. Shuralev[2], M.N. Mukminov[2], G.G. Kazarian[2], O.A. Varlamova[2], Y. Renaudineau[3].
[1]Kazan State Medical Academy, Central Research Laboratory, Kazan, Russia.
[2]Kazan Federal University, Institute of Environmental Sciences, Kazan, Russia.
[3]Brest University Medical School, Laboratory of Immunology and Immunotherapy, Brest, France.

Abstract text

Background and Aims:

To investigate the relationship of education status and disease activity in women with rheumatoid arthritis (RA) and explore the mediating role of environmental factors in this relationship.

Methods:

Data from the prospective Tatarstan women cohort were used. Contribution of the education status (secondary school, specialized secondary school, higher school and university) to the disease activity score using 28-joint assessment (DAS28) was explored and next adjustments for relevant environmental confounders were done regarding factors such as tobacco, alcohol, fish consumption, coffee, tea, DMARDs intake, genetic background (Russians/Tatars), settlement, traffic and industrial pollution.

Results:

When comparing RA patients (n=74), unaffected first degree relatives (FDR) from probands of RA (n=90), and healthy controls (n=92), a lower education level, secondary school and specialized secondary school, was associated with RA development (Odds ratio 1.9 [1.05-3.3], p=0.03). Regarding disease activity in the RA group and after adjustment, low educated patients had moreover 0.9 higher DAS28 (secondary school including specialized school vs high school, p=0.0006 DAS-ESR and p=0.006 DAS-CRP). Next when analyzing cofounder environmental factors from the lower education group, the higher difference in DAS28-ESR (-1.62, p=0.04) was related to fish consumption, which was not the case when exploring the other factors and the highly educated group.

Conclusions:

Higher RA disease activity in lower education patients is associated with reduces sea food consumption.

Accordingly RA therapeutic educational strategies should propose increasing fish consumption, and its impact prospectively evaluated.

This study was supported by research funding from the “Russian Foundation for Basic Research” (No. 18-013-01079).

Keywords **Rheumatoid arthritis**
Education level
Disease activity