



Annual Congress 2022 of the European Academy of Allergy and Clinical Immunology

Atopic dermatitis – New study describes sex differences in disease severity and perception

(Prague, Czech Republic, 1-3 July 2022) Atopic dermatitis (or atopic eczema) is an inflammatory skin disease with a prevalence of 5-15% in Europe. Patients suffer from dry and itchy skin which often leads to sleep disturbances or feelings of stigmatization if visible parts of the body, such as the face or hands, are affected. Although more women than men are affected by atopic dermatitis, it is largely unknown whether there are sex differences in symptom severity. However, it appears that the skin disease impairs the quality of life of female patients more than that of male patients.

Scientists from Germany and Switzerland are conducting a "prospective longitudinal study investigating the (endo) phenotype and remission phase in patients with atopic dermatitis and other allergy-associated diseases" (ProRaD), supported by the Christine Kühne-Center for Allergy Research and Education (CK-CARE) in four centers: Bonn, Augsburg, Davos, Zürich. Within this study, they have analyzed data of patients regarding the association between sex and the severity of atopic dermatitis. Zeiser et al. analyzed cross-sectional data from the baseline visits of 1011 patients aged 12-88 years, who have been included in the ProRaD-Study between 11/ 2016 and 11/ 2021.

Looking at the more objective symptom measures, such as the affected body surface area or the physician-reported symptom scores SCORing Atopic Dermatitis (SCORAD) or the Eczema Area and Severity Index (EASI), male patients had more severe symptoms than female patients in the sample of the ProRaD-study. However, no sex differences were found for more subjective measures, such as patient-reported itching or sleeplessness due to atopic dermatitis and the impairment of the quality of life. After stratification by age groups, education and treatment, the results remained essentially the same, which implies that there were no signs of confounding by age, education or treatment. However, treatment use and lower educational levels were associated with higher symptom severity in both men and women. This implies that patients with high symptom severity are more likely to use some type of treatment and that low educational levels are correlated with high symptom severity, which is following a well-known phenomenon called the social gradient in health. Looking at the correlation of objective severity measures with the dermatologic quality of life index (DLQI), it appears that female patients had more severe quality of life impairment than male patients, especially when having moderate to severe symptoms. In conclusion, this means: Although male patients had more severe 'objective' symptoms than female patients, female patients perceived their 'subjective' symptoms as equally severe and their quality of life was equally impaired.

"With the help of our data we can describe the differences between men and women in how they perceive and are affected by atopic dermatitis. And we are only at the beginning. Several explanations for our findings are possible and we need to carefully analyze more data to better understand, which biological factors, microbiological processes or psychosocial determinants are responsible for what we can observe.", says Katharina Zeiser from the ProRaD study center at the Institute of Environmental Medicine in Augsburg. Prof. Claudia Traidl-Hoffmann adds: "When we understand better, which factors influence the development of the disease in specific groups of individuals or individuals, we can hopefully improve prevention and offer tailor-made treatment options, a personalized medicine." Therefore, the Bonn ProRaD Study Center around Prof. Thomas Bieber and Dr. Laura Maintz is currently working on a sex-specific biomarker analysis to better understand these findings.

About the ProRaD Study Group: The ProRaD Study Group is a group of scientists from Germany and Switzerland who are investigating atopic diseases with a focus on atopic dermatitis in a prospective, observational, multicenter study, the ProRaD Study. The study is funded by CK-CARE (Christine Kühne - Center for Allergy Research and Education) based in Davos. CK-CARE is a project of the Kühne Foundation.



Abstract/ Poster: Zeiser K, Tolkachev V, Rhyner C, Maintz L, Bieber T, Brügger M.-C., Traidl-Hoffmann C, Schmid-Grendelmeier P, and the ProRaD Study Group (2022) Sex differences in atopic dermatitis symptom severity - quality of life equally impaired. Cross-sectional results from the ProRaD study. [Abstract/ Conference Poster] EAACI Hybrid Congress 2022, July 01-03, Prague, Czech Republic

About EAACI:

The European Academy of Allergy and Clinical Immunology (EAACI) is an association of clinicians, researchers and allied health professionals founded in 1956. EAACI is dedicated to improving the health of people affected by allergic diseases. With more 13 000 members from 125 countries and over 75 National Allergy Societies, EAACI is the primary source of expertise in Europe and worldwide for all aspects of allergy.



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