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**The association between permeability of the intestinal barrier and the activity of plaque psoriasis.****Magdalena Chrabaszcz**

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**Introduction:** The human microbiome is composed of bacteria, archaea, viruses and eukaryotic microbes that reside in and on our bodies. Humans and microbes have established a symbiotic association over time, and perturbations in this association have been linked to several immune-mediated inflammatory diseases. Therefore, enteric microbiota dysbiosis with gut barrier disruption may be an important factor in the development of psoriasis.

The aim of the study was to analyse the intestinal barrier integrity in psoriasis.

**Material and methods:** We determined concentrations of gut barrier integrity markers: claudin-3 (tight junction protein), intestinal fatty acid binding protein (I-FABP; endogenous enterocyte protein), in the blood plasma of patients with chronic plaque psoriasis (n = 30) and healthy individuals (n = 30). Claudin-3 and I-FABP were measured using commercially available ELISA test kits.

**Results:** Claudin-3 concentration was higher in patients with psoriasis compared with healthy control (median: 54.07 ng/ml vs 42.36 ng/ml;  $p < 0.001$ ). Patients with psoriasis had also elevated concentration of plasma I-FABP (median 708.8 pg/ml vs 147.1 pg/ml  $p < 0.05$ ). Concentrations of claudin-3 and I-FABP significantly correlated with disease activity assessed by Psoriasis Area and Severity Index.

**Conclusions:** Our results support the hypothesis that dysfunction of intestinal barrier disturbs the homeostatic equilibrium between the microbiota and immune system, that may result in chronic systemic inflammation. This study will provide further insight into microbiome interactions that contribute to health and disease, and eventually may lead to new therapeutic interventions in psoriasis.

**Biography**

Magdalena, student of the First Faculty of Medicine and Public Health at the Medical University of Warsaw. She is a recipient of the Rector's Scholarship Award for best students. She is an active member of dermatology research club. She is also the laureate and participant of many medical conferences. Magdalena is a member of The International Federation of Medical Students Associations (IFMSA) and Erasmus Student Network (ESN). She participated in scientific exchanges in many countries such Germany, Armenia, Bośnia and Hercegovina, Latvia. She is also a member of the Organizing Committee of the Warsaw International Medical Congresses. Her interests in dermatology field focus on psoriasis, surgical dermatology and melanoma.

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