

10TH PHARMACOVIGILANCE CONGRESS

September 20-21, 2017 Charlotte, USA

Severe acne treated with Isotretinoin is associated with dysbiosis and its consequences

Donatini Bruno and Le Blaye Isabelle

Medicine Information Formation, France

Background: Acne is caused by *Propionibacterium acnes* which sometimes can be treated with isotretinoin. *Propionibacteria* may adhere to intestinal mucosa. Isotretinoin may induce mucosal side-effects. We investigated whether severe acne is associated with dysbiosis and its consequences.

Methods: All female patients consulting for the first time to the same gastroenterologist were included into a prospective cohort study. Those with a medical history of severe acne were compared to a control group. The study stopped when 1,000 patients were included into the control group. Male patients were not included because gender influences small gut absorption, dysbiosis, immunity and Body Mass Index. Age, Body weight, Body Mass Index, exhaled hydrogen or methylacetate after fasting (measured by the MX6 of Gazdetect France), medical history of allergy or auto-immune disease, oral herpes simplex 1/2 replication (medical history confirmed by qPCR run into a central laboratory; material: Amplix® from Alldiag®; reagents: Bioneer®) were collected. Normal level of fecal elastase excluded exocrine pancreatic insufficiency. Pre-albumin level was checked for all patients with a history of severe acne and was within the normal range.

Results: 1,054 patients were enrolled: 1,000 control, 54 with a medical history of severe acne, including 26 with isotretinoin received more than 6 months. Despite a younger age (especially in the isotretinoin group), patients with severe acne presented with decreased body weight. Those treated with isotretinoin presented more likely with dysbiosis, chronic oral herpes and allergy, suggesting dysimmunity.

Conclusion: Isotretinoin is associated with dysbiosis (perhaps malabsorption) and signs of dysimmunity. A facilitating role of *Propionibacterium* cannot be excluded.

donatini@orange.fr