

Gastrointestinal Environmental and Hormonal Changes in Obese Patients with Metabolic Syndrome

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Gastrointestinal system is an organ essential for digestion and extraction of nutrients, but it's also body's largest endocrine organ. There are more than 20 different regulatory hormones secreted by 10 different enteroendocrine cells found in stomach, small and large intestines such as incretins (glucose dependent insulinotropic polypeptide, glucagon like peptide 1), peptide YY, ghrelin, oxyntomodulin, obestatin, cholecystokinin and others. Intestinal epithelial cells are the key players in maintaining metabolic and immune homeostasis, forming a surface area up to 40m², which makes them body's most important interface with external environment, with a role to allow efficient nutrient absorption while maintaining barrier function and modulating immunity. Enteroendocrine cells, capable of "chemosensing" nutrients, bile acid, various tastes and bacterial products interacting with their surface receptors are scattered throughout the gastrointestinal tract and as a response to stimuli they secrete hormones. They are an important link in energy homeostasis, as a crosstalk between gut and brain and gut and immune system. Microbiota is so called "organ within an organ", which contains a great number of bacteria (10¹¹). Obese patients have altered fasting and postprandial secretion of gastrointestinal hormones and changed microbiota, which leads to progression of weight gain, insulin resistance, metabolic syndrome, inflammation and cancerogenesis. Over the last few years we developed a therapy based on gut hormones as a target for obese patients and researchers are still exploring new possibilities. Recent studies have shown positive results on weight loss in obese patients on probiotics and prebiotics therapy due to microbiota changes.

Biography:

Nevena Ilic has completed her MhD studies in Reproductive endocrinology in 2011 and MhD studies in Thyroid diseases in 2014, in Italy. She completed her subspecialization in Endocrinology at Belgrade University Medical School in 2009 and Internal medicine specialization at Military Medical Academy Hospital, Belgrade in 2002. From 2015 she works as Prime Endocrinologist at Euromedik General Hospital. She is a scientific associate at S. Eugenio Hospital in Rome where she organized several International Conferences. She spoke at several International congresses. She has published 23 papers in reputed journals. She is a member of European and Italian Endocrinology Society.