OMICS Group Conferences
Accelerating Scientific Discovery

3rd International Conference and Exhibition on
Probiotics, Functional & Baby Foods
September 23-25, 2014 Hotel Royal Continental, Naples, Italy

Effect of bariatric surgery on serum levels of gastrointestinal hormones in obese patients

Alessandro Federico[1], Salvatore Tolone[2], Vania Patrone[3], Marco Romano[1], Antonietta Gerarda Gravina[1], Marcello Dallio[1], Concetta Tuccillo[1], Anna Licia Mozzillo[2], Vincenzo Amoroso[2], Lorenzo Morelli[3], Ludovico Docimo[2] and Carmela Loguercio[1]

[1,2]Centro Second University of Naples, Italy

[3]Università Cattolica del Sacro Cuore, Italy

Aim of the study is to evaluate dietary intake, nutritional assessment, plasma levels of gastrointestinal peptides that regulate food intake and fecal microbiota in severely obese patients before and after bariatric surgery. We studied 28 severely obese patients, 19 of which underwent biliointestinal bypass, and 28 healthy normal weight controls. In all subjects we evaluated food intake, body composition, plasma levels of peptide YY (PYY), glucagon-like peptide (GLP)-1, GLP-2, ghrelin (GHR), orexin (ORE) and cholecystokinin (CCK), and fecal microbiota. In severely obese patients all parameters were evaluated at 0 time and 6 months after bariatric surgery. In obese patients we found: 1) a higher intake of nutrients, both as calories and as macro and micronutrients in respect to controls ($p<0.05$); 2) a decrease of free fat mass ($p<0.01$) and an increase of BMI ($p<0.01$), fat mass ($p<0.01$) and trunk fat ($p<0.01$) in respect to controls; 3) a significant decrease of GLP-1 and an increase of GLP-2, GHR and PYY in respect to controls ($p<0.05$); 4) further increase in GLP-2, GHR and PYY, and increase over control values of GLP-1 after bariatric surgery ($p<0.05$ versus pre-surgery). Obese individuals were found to harbor a community dominated by members of the Clostridial clusters XIVa and IV, whereas prominent bands after surgery were identified as *Lactobacillus crispatus* and *Megasphaera elsdenii*-related phylotype. We postulate that the beneficial effects of bariatric surgery may at least in part be accounted for by changes in circulating GI peptides and fecal microbiota.

Biography

Alessandro Federico is Assistant Professor of Gastroenterology and Staff Physician, Department of Hepato-Gastroenterology, Faculty of Medicine, Second University of Naples, Naples, Italy He has published more than 50 papers in reputed journals and has been serving as an editorial board member of repute.

alessandro.federico@unina2.it