

Letter to the Editor

Microbiome and bariatric surgery: new options to precision surgery

Dear Editor,

The close relationship between intestinal microbiome, health and pathologies is a concept known over a century ago, by Nobel Ilyich Mechnikov¹. In the last decades, research has focused on the interaction between host and microorganisms that colonize the gastrointestinal tract (GIT). Bariatric surgery has to considerate the modulation on the microbiome for treatment success, since the GIT is always involved. Based on the review by Kehagias et al² regarding the advantages of bariatric surgery with Sleeve Gastrectomy (SG) technique, we wondered which are the effects on microbiome and strategies for improving outcomes. Both SG and Gastric Banding are both safe and appropriate for obese patients^{2,3}, but in the new perspective of the omics and personalized medicine, in which biological therapies are preceded by genetic analysis⁴, it is necessary to apply this knowledge to clarify the contribution of intestinal flora, since the microbiome is one of the keys to precision medicine⁵. In the animal model, the microbiota plays a role in the recovery of fat mass after bariatric surgery. In humans, the molecular mechanisms and the interactions with the microbiota, that influence the storage of the adiposity, must be clearly proven⁶. A restore to the physiological colonization of the microbiota, probably due to changes in intestinal anaerobiosis and biofilm, obtained following Gastric Bypass⁷, is highlighted. The characterization of the microbiome before surgery could help to identify patients who will lose more weight or need to be treated to improve therapeutic success⁶. In future, bariatric surgery will have to consider not only the techniques, but also the new classification of obesity⁸ the microbiome and food quality, since some foods are often wrongly labeled as healthy, but do not contain bioactive molecules⁹.

Conflict of Interest

The Authors declare that they have no conflict of interests.

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