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Diet in irritable bowel syndrome: can a case-specific diet be an alternative to standardized low FODMAP diet?

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Irritable Bowel Syndrome (IBS) is a functional chronic, relapsing and often life-long disorder. Generally referred symptoms are abdominal pain or discomfort, change in bowel habits, disordered defaecation (constipation and/or diarrhoea), abdominal distension and bloating. To date, it is being more and more frequent, with a prevalence of 10% to 30% in the general population, becoming one of the most common gastrointestinal disorders. Different strategies have been investigated for IBS management, from pharmacological and nonpharmacological therapies. Yet, it is generally accepted and demonstrated that diet plays a key role in IBS, becoming the first-line approach in IBS treatment. Different dietary approaches have been investigated and the most effective seems to be the low Fermentable Oligosaccharides, Disaccharides, Monosaccharides and Polyols (FODMAP) diet; there is a growing body of evidence supporting its beneficial effects. Yet, since an important proportion of patients with irritable bowel syndrome associate their symptoms with the ingestion of specific foods and sometimes foods classified ad FODMAP may not be a trigger, while those not classified as FODMAP may worsen symptoms, a personal susceptibility may occur. Moreover, as it is a restrictive diet, the low-FODMAP diet may lead to nutritional deficiencies and disordered eating.In this study, we investigated if a case-specific diet, based on personal tolerance versus certain food items, could be an alternative approach in IBS dietary therapy.

Methodology and Theoretical Orientation: The present study was performed in the Gastroenterology Unit of S.Maria della Scaletta Hospital. Patients were recruited from April to September 2018. For patients' recruitment, Rome IV criteria were used; questionnaires were performed by the physicians during medical examinations. Those who fulfilled the criteria were then interviewed to assess the IBS subtype. Questionnaires about food habits and food frequency, as well as symptoms associated with specific food items consumption were provided. Then, a personalized 14-day diet was elaborated for each patient. Diets provided a total energy according to the patient's requirements in order to maintain the initial body weight; the distribution between macronutrients was similar for all diets, following a typical Mediterranean diet, with 55-60% carbohydrates, 12-18% proteins and 24-32% fat. The amount of fiber varied from IBS-C and IBS-D. Together with the grams for each ingredient of the diet, advices for cooking methods, food storage and recipes were provided in order to better monitor the diet adhesion. To assess the effect of diet on IBS symptom, an IBS-SS was used. The first grade of the severity score was assessed the day before the patients started the diet, and was then performed again after 1 month of diet.

Findings: From the 14 patients who participated to the study, 12 reported an improvement of symptoms associated with IBS. One patient was considered borderline because a diagnosis of gallstones was made during the study but the results were taken into account, and another patient (IBS-D) started an antibiotic therapy after 1 week of diet, so the results were not considered. For the IBS-D subtype patients, the elimination of some food items, not all FODMAPs, decreased IBS-SS from severe to mild in 3 patients, from severe to remission in 2 patients and from moderate to remission in 2 patients. For IBS-C patients, symptoms showed a slower improvement over time. All 6 IBS-C patients reported an improvement in stool frequency and stool appearance, but bloating and abdominal distension was still present in 2 of them with the same intensity as before the diet, while for the remaining 4 the pain or discomfort perceived was reduced from severe to remission.

Conclusion and Significance: Symptoms perceived or reported by patients with IBS appear to be influenced by the food consumed and diet plays a key role in this disease management. A case-specific died may help patients in day to day life, because they are not told just what to avoid, but what they can consume. Moreover, individual diets allow a larger variety in food choices as food items are not excluded in general just because classified as FODMAPs or allergy-inducing, but are excluded or reduced according to individual susceptibility and tolerance. Furthermore, a case-specific diet is usually elaborated by a patented specialist, which is also a guarantee for patients to have a balanced diet that will not cause nutritional deficiencies by the time. For this reason, we believe that a case-specific diet may be an effectual alternative to standardized exclusion diets or low-FODMAP diets. Yet, the number of participants to this study is not statistically reliable; nor the single IBS-SS criteria can be used to establish whether an improvement occurs; biochemical markers of inflammation should be taken into account, and other monitoring questionnaires should be performed. Moreover, patients should be monitored for a longer time to establish if the symptoms ameliorate and they maintain the results over time. Further studies must be performed to assess a feasible dietary strategy for IBS management that can be followed life-long.

Biography

Dr. Odila Mezini is a Biologist graduated at Bologna University with 110/110 cum laude. After graduation she has worked as a researcher in the field of nanomaterials for bone tissue engineering and pollutants in water and food. After one year of research, she obtained two Master Degrees in "Biologist in evaluation of risk in working a living environments" and "Nutrition and health education" with the maximum of grades. Now Dr. Odila works as a nutritionist in her own clinic; she visited both healthy patients and those who are affected by chronic pathologies, metabolic disorders, cardiopathies, eating disorders, endocrine disorders, etc.

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