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Dietary Choices and Metabolic Differences in Patients who have Developed Postprandial Hypoglycemia (dumping syndrome) After Roux-en-Y Gastric Bypass Compared to Healthy Controls

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Background: Hyper insulinemic hypoglycemia (HH) is a post-operative complication after Roux-en-Ygastric bypass (RYGBP). Dietary intake and lifestyle a choice affect the symptoms but is not well-studied neither are the metabolic parameters.

Methods: Food intake of ten patients with HH and nine controls was registered, during seven days. Meals per day, energy distribution, carbohydrate quality and nutrient content were compared between the groups and to the dietary recommendations. Furthermore, all patients wore a blinded continuous blood glucose monitor (CGM, a Dexcom-4) during the study and metabolic parameters were assessed.

Results: Meals per day and energy distribution complied with the dietary recommendations in both groups, but fiber intake was lower. The maximum dietary recommendation for added sugar (10% of total energy intake) was exceeded by both groups; those with HH (14.6% of total energy intake) and the control group (11.4% of total energy intake) but the difference was not statistically significant ($p = 0.327$). The HH group had a lower intake of vitamin B12 (3.4±1.5 µg vs 5.5±2.3 µg, $p<0.05$) and calcium (680±193 mg vs 866±184 mg, $p<0.05$) compared to the control group. The proportion of subjects (with no difference between the two groups) that actually complied with the dietary recommendations was only 16% for vitamin A, 53% for vitamin D, and 26% for iron. The metabolic parameters will also be presented but are now processed.

Conclusion: There were no statistically significant differences in compliance to the dietary recommendations between the HH group compared to healthy controls apart from lower intake of B12 and calcium in the HH group. However, there are trends towards higher intake of sugar, iepoor carbohydrate quality and lower micronutrient content in the HH group. The study shows that the overall intake of dietary micronutrients after RYGBP is inadequate. The metabolic results will also be added to this presentation.

Biography:

Joanna Uddén Hemmingsson is a senior consultant in the Endocrinology department and in charge of the Medical Obesity Unit at St Goran's Hospital in Stockholm, Sweden. Dr Uddén Hemmingsson is also an affiliated researcher at the Department of Medicine in the Karolinska Institute at Karolinska University Hospital in Huddinge.

Her research interests include diabetes and metabolic implications of weight regulation. She is engaged in several associations within both steering and organizing committees for obesity and diabetes research as well as education, and also chairperson of the Swedish Organization for the Study of Obesity.

She has published in several international medical journals in the areas of bariatric surgery, but also about endocrine and stress aspects of abdominal fat accumulation, as well as on the impact of behavioral changes and metabolic risk factors.