

weight >120% ideal body weight). Homeostatic Model Assessment (HOMAB), Insulinogenic index (IGI), Corrected insulin response (CIR), Insulin area under the curve/Glucose area under the curve (AUCins/AUCglu), and the Stumvoll 1st Phase Estimate (Stumvoll) were calculated from insulin and glucose levels measured fasting and 30, 60, 90, 120, and 180 minutes after an oral glucose load (75 grams pre-pregnancy, 100 grams in pregnancy).

Results: The best OGTT-based measure for estimation of 1st phase insulin response differed across study timepoints. In early and late pregnancy, AUCins/AUCglu had the strongest correlation with 1st phase insulin response (early: R=0.79, P<0.0001; late: R=0.69, P<0.0001), but was not associated with 1st phase insulin response pre-pregnancy (R=0.32, P=0.08). IGI had the strongest correlation with first phase insulin response pre-pregnancy (R=0.50, P=0.005) and was correlated with 1st phase insulin response in late (R=0.68, P=0.0001), but not early (R=0.36, P=0.07) pregnancy. Stumvoll was the only OGTT-based measure that was significantly correlated with 1st phase insulin response at all timepoints (pre: R=0.44, P=0.01; early: R=0.67, P=0.0001; late: R=0.67, P=0.0001). HOMAB was the weakest correlate of 1st phase insulin response, though the correlation was significant in early pregnancy (pre: R=-0.04, P=0.82; early: R=0.33, P=0.05; late: R=0.18, P=0.28).

Conclusion: OGTT-based measures of insulin secretion do not have a consistent relationship with 1st phase insulin response across pre-, early, and late pregnancy. Our findings suggest that Stumvoll can be used in OGTT-based longitudinal studies of insulin secretory response that begin prior to pregnancy and span gestation. For cross-sectional studies in pregnancy, AUCins/AUCglu are the best estimates of 1st phase insulin response.

Adipose Tissue, Appetite, and Obesity OBESITY TREATMENT: GUT HORMONES, DRUG THERAPY, BARIATRIC SURGERY AND DIET

Albuminuria and Obesity - Which Are the Associated Factors?

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Introduction

The association between obesity and renal dysfunction has been widely studied. Albuminuria is a cardiovascular risk factor and the most prevalent marker of kidney injury in people with obesity. Despite the higher prevalence of hypertension and diabetes in those patients, other contributing factors are still unknown.

We aimed to explore the factors related to albuminuria in obesity, analyzing its variation after bariatric surgery.

Methods

We evaluated 2518 patients undergoing bariatric surgery, of those, 1243 with preoperative albuminuria measurement were included in this study. Albuminuria was determined by the albumin-creatinine ratio (RAC) in an occasional urine sample (mg/g) or by the 24-hour urine albumin excretion rate (TEA) (mg/24h). Means and medians were compared using Student's T-test or Mann-Whitney tests, respectively. Spearman correlation was used.

Results Age ($\rho = 0.073$; $p = 0.010$), body mass index (BMI) ($\rho = 0.139$; $p < 0.001$), waist circumference (WC) ($\rho = 0.220$; $p < 0.001$), glycated hemoglobin (HbA1C) ($\rho = 0.221$; $p < 0.001$), systolic blood pressure (SBP) ($\rho = 0.203$; $p < 0.001$), diastolic blood pressure (DBP) ($\rho = 0.134$; $p < 0.001$), uricemia ($\rho = 0.141$; $p < 0.001$) and C-reactive protein (CRP) levels ($\rho = 0.090$; $p = 0.017$) were positively correlated with albuminuria. Patients with albuminuria (TEA / RAC \geq 30) had higher BMI (45.0 \pm 6.0 vs. 43.2 \pm 5.6 kg / m²; $p < 0.001$), WC (129.3 \pm 13.1 vs. 122.0 \pm 12.9 cm; $p < 0.001$), SBP (142.7 \pm 18.0 vs. 134.1 \pm 16.5 mmHg; $p < 0.001$), DBP (88.0 \pm 12.6 vs. 83.2 \pm 10.3 mmHg; $p < 0.001$), uricemia (6.1 \pm 1.5 vs. 5.4 \pm 1.4 mg / dL; $p < 0.001$) and CRP (11.3 (16.4) vs. 8.3 (9.6) mg / L; $p < 0.001$). Excluding patients with diabetes and hypertension, BMI and WC remained statistically positively correlated with urinary albumin excretion. After surgery, the decrease of albuminuria was correlated with the reduction of HbA1C ($\rho = 0.144$; $p < 0.001$) and CRP ($\rho = 0.113$; $p = 0.037$).

Conclusion Anthropometric, inflammatory and metabolic factors, namely WC, CRP and uricemia, may be involved in the etiopathogenesis of albuminuria in obese patients. Bariatric surgery is the most effective method to reverse obesity and it has been shown to be a promising therapy on the treatment of associated renal dysfunction.

Pediatric Endocrinology

PEDIATRIC OBESITY, THYROID, AND CANCER

Pleuropulmonary Blastoma and Multinodular Goiter in a 22 Yr Old Male with DICER1 Syndrome

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Background

DICER1 syndrome is an autosomal dominant condition due to mutations in the DICER1 gene, located on chromosome 14q32.13. Patients are at increased risk for malignant and benign tumors, including pleuropulmonary blastoma (PPB), cystic nephroma, ovarian Sertoli-Leydig cell