

Differential increase in HDL-c post bariatric surgery for Singaporean Patients according to Glucose Status.

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Background: HDL-c is negatively correlated with cardiovascular risk. Patients with diabetes and pre-diabetes or abnormal glucose tolerance (AGT) have low HDL-c. Few studies have compared the change of HDL-c post bariatric surgery between patients with normal glucose tolerance (NGT) and AGT. Aims of Study: To compare the change of HDL-c post bariatric surgery between patients with NGT and AGT. Methods: HDL-c levels at 0, 3 and 6 months were transformed using the multivariate repeated measures model, with glucose tolerance being the between-subject factor. Results: 46 patients (61% females) underwent laparoscopic bariatric surgery from September 2008 to November 2010. 78% had sleeve gastrectomy, 20% gastric bypass, and 2% bilio-pancreatic diversion. The mean age was 39 years (+/-10.6) with a mean BMI of 43.6kg/m<sup>2</sup> (+/-9.8). 54% had NGT versus 46% with AGT. Only 1 patient (4%) in the NGT group was on a fibrate pre-op but none in the AGT group. Average weight loss at 6 months was 25.5kg and 22.2kg for NGT and AGT respectively. HDL-c rose significantly in both groups (mean HDL-c for NGT were 1.06, 1.49 and 1.68 mmol/L at 0, 3 and 6 months; mean HDL-c for AGT were 0.89, 0.92 and 1.08 mmol/L; within-subject p=0.006). Thus HDL-c increased 58% in the NGT but only 21% in the AGT. HDL-c in the NGT was significantly higher than in the AGT group throughout the 6 months (between-subject p=0.009).