

Title: Early dumping syndrome with discordant hyperinsulinism after sleeve gastrectomy: small case series

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Aim: Dumping syndrome with hyperinsulinemic hypoglycemia (HH) is recognized in persons post gastric bypass surgery. However, it is rarely described post sleeve gastrectomy (SG) surgery, and this paper presents a more detailed analysis of four such subjects.

Methods: Four subjects who reported postprandial hypoglycemic symptoms after SG were studied. Subjects conducted/underwent: home capillary blood glucose monitoring; computed tomography (CT) of the pancreas; prandial provoked hypoglycemic testing; and modified gastric emptying scintigraphy study.

Results: No subjects reported typical gastrointestinal symptoms of dumping syndrome; however all had frequent postprandial hypoglycemia on capillary blood glucose monitoring at an average of 12.3 months ($\sigma = 10.6$) after surgery. All CT imaging of the pancreas was normal. All subjects demonstrated HH after administration of 75-gram oral glucose (test) at an average of 147 minutes ($\sigma = 42$) with a mean serum glucose of 2.8 mmol/L ($\sigma = 0.22$), a mean serum insulin of 87 pmol/L ($\sigma = 59$), and a mean C-peptide of 860 pmol/L ($\sigma = 24$). All subjects had gastric emptying scintigraphy demonstrating early dumping of gastric contents with a Tc-99 mean half-life of 29 minutes ($\sigma = 11.4$).

Conclusions: This case series demonstrates early dumping syndrome with discordant timing of hyperinsulinism in a rare subset of SG treated patients.

(No financial support was given for this study.)