Roux-en-Y Gastric Bypass Reversal for Postprandial Hyperinsulinemia Hypoglycemia is Associated with Modest Weight Regain and Reduction in Symptoms at 3 Years

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Background

- A rare late complication of Roux-en-Y Gastric Bypass (RYGB) is Postprandial Hyperinsulinemic Hypoglycemia (PHH), likely secondary to GLP-1 hypersecretion.
- A minority of these cases can become severe, medically intractable and require surgical revision.
- Reversal of the RYGB has replaced distal pancreatectomy as the preferred, however, little data are available on the efficacy of this approach.

Aim

- The primary aim is to evaluate the efficacy of RYGB reversal with Roux limb resection for intractable PHH.

Methods

- This is a descriptive, retrospective review of outcomes in patients referred to a large regional diabetes treatment center who underwent RYGB reversal with Roux limb resection for the primary indication of intractable symptomatic hypoglycemia.
- Patients were included if they had previously failed maximum dietary and medical therapy.
- Perioperative weight change, hypoglycemic symptoms and comorbidities were evaluated.

Results

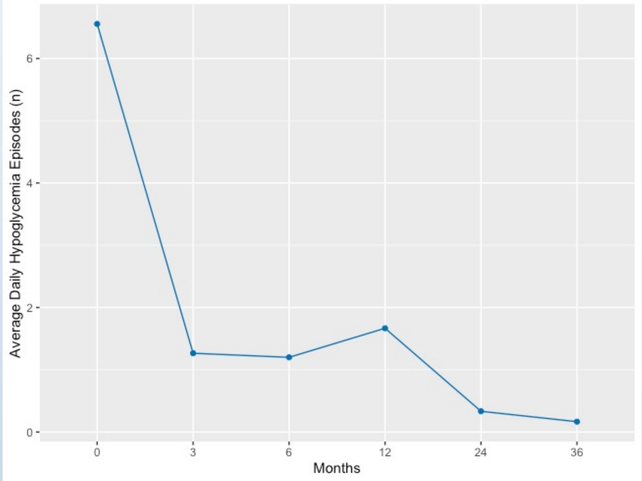


Table: Hypoglycemia and weight measures prior to and after Roux-en-Y Gastric Bypass reversal.

	Pre-Reversal (n=9)	3 months (n=8)	6 months (n=5)	1 year (n=3)	3 years (n=3)
Daily Hypoglycemia Episodes – n	6.6 (3.8)	1.3 (0.9)	1.2 (1.3)	1.6 (2.1)	0.2 (0.28)
Glucose Nadir – mg/dL	29.4 (6.4)	53.6 (8.5)	36 (19.8)	40 (0)	50 (0)
Weight – lbs	142 (17.2)*	171.7 (39.3)	163.5 (21.6)	167.9 (26.6)	176.8 (21.6)
Weight Gain – lbs	--	10.4 (26.6)	15.6 (29.2)	15.6 (47.4)	35.9 (25.9)
BMI – kg/m²	26.9 (5.6)	29.4 (5.3)	28.7 (3.4)	28.9 (4.7)	27.1 (7.7)*

Presented as mean (standard deviation) for normally distributed variables specified.
*Non-normally distributed variables presented as median (interquartile range)

Conclusions

- Intractable post-RYGB hypoglycemia is rare and may respond to roux limb resection based on these limited retrospective data.