



Weight Loss, Comorbidity Resolution, and Nutritional Outcomes After Distalization of RYGB

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Background

- Roux-en-Y gastric bypass (RYGB) is an effective bariatric procedure, but some patients can have insufficient weight loss, weight regain, or persistent obesity-related comorbidities.
- Distalization is suggested as an effective revisional option that can enhance weight loss and potentially improve comorbidities, though it carries a risk of nutritional deficiencies.
- The purpose of this study was to evaluate outcomes in patients who underwent RYGB distalization.

Methods

- We performed a retrospective review of patients who underwent distalization of RYGB between 2015 and 2025 at a single academic center. Preoperative and postoperative data were collected from the electronic medical record.
- Outcomes assessed included percent total body weight loss, body mass index (BMI) trends, comorbidity status, nutritional markers, 30-day postoperative events, and 2-year reoperation rates.
- Continuous variables are reported as mean ± standard deviation (SD), and categorical variables as counts and percentages. Pre and post operative comparisons were performed using paired t-tests for normally distributed data or Wilcoxon signed-rank tests for non-parametric data.

Procedure Details

- Distalization was achieved by dividing the Roux limb just proximal to the original jejunojejunostomy. The small intestine was measured retrograde from the terminal ileum for a predetermined length, and this segment was brought up to construct a new jejunojejunostomy, effectively lengthening the biliopancreatic limb and reducing the length of the common channel and the total alimentary limb length
- Mean common-channel length: 279.4 ± 60.4 cm
- Mean total alimentary limb length: 376 ± 43.8 cm
- All distalization procedures were done laparoscopically with no intraoperative complications

Table1. Baseline Demographics

Characteristic	All patients (n=17)
Age (mean ± SD)	49.1 ± 8.6 years
Sex, n(%)	
Male	1 (5.9%)
Female	16 (94.1%)
Race, n (%)	
African American	3 (17.6%)
Hispanic	4 (23.5%)
Caucasian	10 (58.8%)
Preoperative TBW (mean ± SD)	252.7 ± 32.5 lbs
Preoperative BMI (mean ± SD)	44.0 ± 8.1 kg/m²

Table 2. Nutritional Deficiencies at 6 Months and 12 Months

Variable	Patients tested (6 months)	Deficient, n(%)	Patients tested (12 months)	Deficient, n(%)
Albumin	11	2 (18.1%)	10	1 (10.0%)
Hemoglobin	11	3 (27.3%)	10	4 (40.0%)
Iron	10	0 (0%)	10	1 (10.0%)
Vitamin D	11	3 (27.3%)	9	3 (33.3%)
Vitamin A	10	2 (20.0%)	8	0 (0%)
Vitamin E	10	0 (0%)	8	0 (0%)
Vitamin K	10	3 (30.0%)	8	2 (25.0%)
Vitamin B12	10	0 (0%)	10	0 (0%)
Vitamin B1	9	1 (11.1%)	8	0 (0%)

Table 3. Comorbidity Outcomes

Comorbidity	Preoperative (n=17)	6 Months (n=13)	12 Months (n=9)	24 Months (n=5)
Diabetes	5 (29.4%)	3 (23.1%)	2 (22.2%)	1 (20.0%)
Hypertension	2 (11.8%)	1 (7.7%)	1 (11.1%)	1 (20.0%)
Gastroesophageal Reflux Disease	4 (23.5%)	4 (30.8%)	0 (0%)	0 (0%)
Obstructive Sleep Apnea	5 (35.3%)	2 (15.4%)	1 (11.1%)	1 (20.0%)
Hyperlipidemia	1 (5.9%)	2 (15.4%)	1 (11.1%)	0 (0%)

Weight Loss and Nutritional Outcomes

- BMI (mean ± SD)
 - 6 mo: 44.0 → 35.7 ± 5.5 kg/m² (p=0.002)
 - 12 mo: 35.3 ± 6.3 kg/m² (p=0.008)
 - 24 mo: 32.8 ± 4.77 kg/m² (p=0.003)
- % Total Weight Loss
 - 6 mo: 15.1 ± 6.3%
 - 12 mo: 21.9 ± 7.6%
 - 24 mo: 19.3 ± 14.3%
- Albumin: 4.16 → 3.91 g/dL at 12 mo (p=0.045)
- Hemoglobin: 13.9 → 12.6 g/dL at 12 mo (p=0.012)
- Other micronutrients: Stable
- Malnutrition-related reoperations: None

Postoperative Events

- Five patients presented to the emergency department
 - Three discharged without admission
 - Two readmitted:
 - Abdominal pain not adequately controlled with oral medication
 - Bowel obstruction requiring reoperation on POD5 (only reoperation in two years in the cohort)
- One patient developed UTI, treated outpatient

Conclusion

- Distalization of RYGB in this cohort achieved significant and durable weight loss with acceptable nutritional outcomes and a low morbidity profile.
- A common channel length of 200–300 cm and a total alimentary limb length of 300–400 cm may provide an optimal balance between efficacy and safety
- With careful patient selection, multidisciplinary follow-up, and rigorous nutritional surveillance, distalization appears to be a safe and effective revisional strategy for patients with persistent obesity after primary RYGB.