LEARNING CURVE OF SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS WITH SLEEVE GASTRECTOMY

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Background

- Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) has shown promising results for weight loss and comorbidity resolution.
- Barriers to its widespread adoption exist, and studies on the learning curve are limited.
- This study presents early data on the learning curve at a large multi-center academic institution.

Methods

- **Baseline characteristics:** Large multi-center academic institution
- **Inclusion criteria**: Adult patients who underwent primary and revisional SADI
- **Parameters:** Textbook outcome (TO) for robotic SADI-S was defined by four criteria:
  - Operative time ≤267 minutes (75th percentile)
  - Postoperative hospital stay ≤1.7 days (75th percentile)
  - No conversion to laparotomy/ no rehospitalization or death
- **Statistical methodology**: Cumulative sum analysis
- The TO rate was calculated using cumulative sum analysis to assess mastery.
- Secondary outcomes included complication rates, reoperation, readmission, and operative time. A significance level of P<0.05 was used

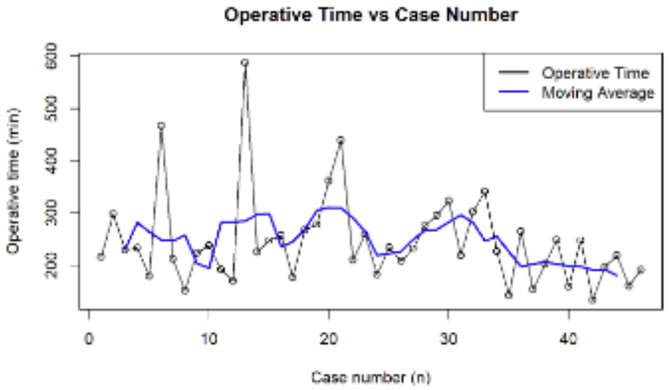


Figure 1 Scatter Graph for Operative Time

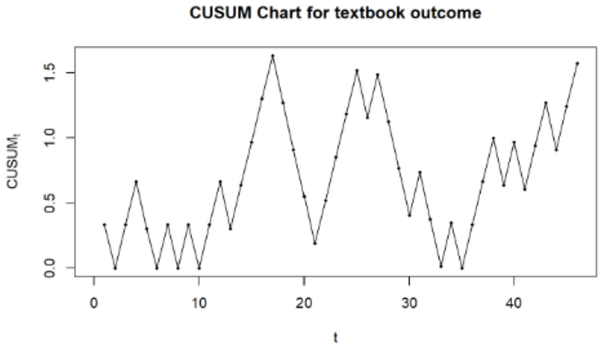


Figure 2 CUSUM Chart

Factor	All patients (n = 46)
Gender: Male/Female	11/35
Mean age (years)	40.39 ± 11.89
Preoperative body weight (kg)	136.35 ± 25.94
Preoperative BMI (kg/m^2)	49.23 ± 7.10
ASA Classification	
Grade III	46 (100%)

Table 1 Patient Demographics

	Learning stage group (n = 35)	Mastery stage group (n = 11)	Statistic	P-value
Gender (Male/Female)	8/27	3/8	X^2<0.001	1
Age (years)	40.43 ± 12.24	40.27 ± 11.26	t = 0.039	0.969
Preoperative body weight (kg)	135.09 ± 25.85	140.35 ± 27.06	t = -0.569	0.577
Preoperative BMI (kg/m^2)	48.91 ± 6.85	50.24 ± 8.12	t = -0.085	0.631

Table 2 Comparison of the demographics between the 2 study groups

Results

- The TO rate increased after the 35th case, leading to the division of patients into two groups:
  - Learning stage (first 35 cases)
  - Mastery stage (last 11 cases)
- Operative time was significantly shorter in the mastery stage group (P=0.004)
- No significant differences were observed in demographics, complications, reoperations, readmissions, drainage tube use, or length of stay.
- There were no conversions to laparotomy or deaths.
- The complication rate was 8.7% (n=4), with reoperation and readmission rates of 6.5% (n=3) and 8.7% (n=4), respectively.

Discussion

- As SADI becomes a more prevalent surgical option for patients seeking significant weight loss, this study is a useful tool to help surgeons determine the number of cases needed to achieve mastery.
- Studies comparing the learning curve between SADI and other more popular bariatric surgeries would also be useful to demonstrate the feasibility of SADI as an option for patients requiring significant weight loss.

References

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