PREDICTION OF INCREASED DIFFICULTY IN ROBOTIC COLORECTAL SURGERY

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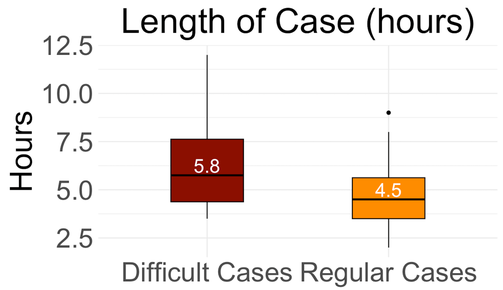
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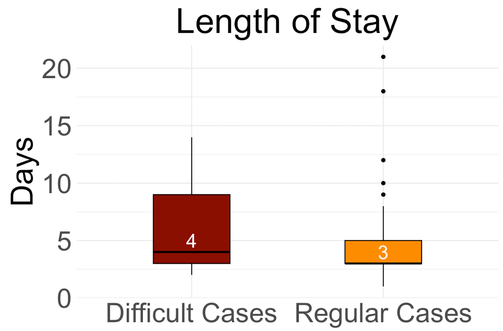
Introduction

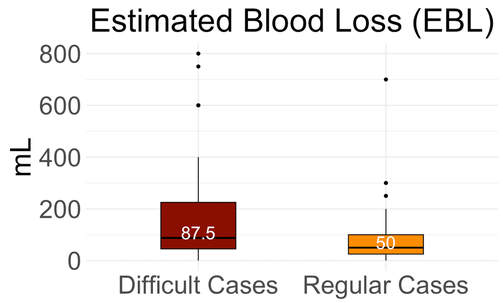
Increased surgical difficulty in robotic colorectal procedures may influence postoperative outcomes and recovery. Factors such as obesity, adhesions, and severe fibrosis may play a role in this complexity. This study aims to evaluate whether specific intraoperative factors influence postoperative outcomes in robotic colorectal surgery.

Methods

- Retrospective study
- Robotic colorectal surgeries performed at a single academic institution for both benign and malignant diseases
- From November 2021 to March 2024
- Operative time, length of hospital stay, postoperative bowel function recovery, estimated blood loss (EBL), postoperative complications within 30 days, and 30-day readmissions related to surgery were reviewed
- Statistical analyses were performed using the Mann-Whitney U and Chi-square tests
- Cases were defined as having increased difficulty based on the application of the modifier-22 code by the operating surgeon







Results

- 112 patients were included
- 28 patients (25%) were considered difficult (modifier-22)
- No conversions to open surgery
- More difficult cases had significantly:
  - Longer operative times (median: 5.8 hours vs. 4.5 hours, p = 0.001)
  - Longer hospital stays (median: 4 days vs. 3 days, p = 0.002)
  - Higher EBL (median: 87.5 mL vs. 50 mL, p = 0.005)
- No significant differences were seen in postoperative bowel function recovery, postoperative complications, or readmission rates
- Regular cases: 27 of 84 patients (32%) had a BMI ≥ 30
- Difficult cases:
  - 18 of 28 patients (64%) had a BMI ≥ 30 (p=0.0026)
  - 23 of 28 patients (82%) had adhesions/severe fibrosis
  - 15 patients had both these factors

Conclusion

This study suggests that more challenging robotic colorectal surgery cases caused by obesity, adhesions, and/or radiation fibrosis resulted in prolonged hospital stay. This information may be useful for discharge planning.

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