Implementation and Outcomes of Laparoscopic Colorectal Surgery: A Latin American Country Experience

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Introduction

- Laparoscopic colorectal surgery provides significant benefits, including reduced blood loss, less postoperative pain, faster bowel recovery, shorter hospital stays, and lower complication rates
- However, in developing countries, its widespread adoption remains limited due to high costs, lack of equipment, shortage of trained surgeons, inadequate infrastructure, and restricted access to training and mentorship
- Despite these obstacles, the establishment of structured surgical teams has enabled the successful adoption of minimally invasive colorectal surgery in devoloping countries.

Objective

- To analyze our experience and outcomes following the establishment of a dedicated laparoscopic colorectal surgery team in a Latin American setting, specifically in three academic and non-academic institutions

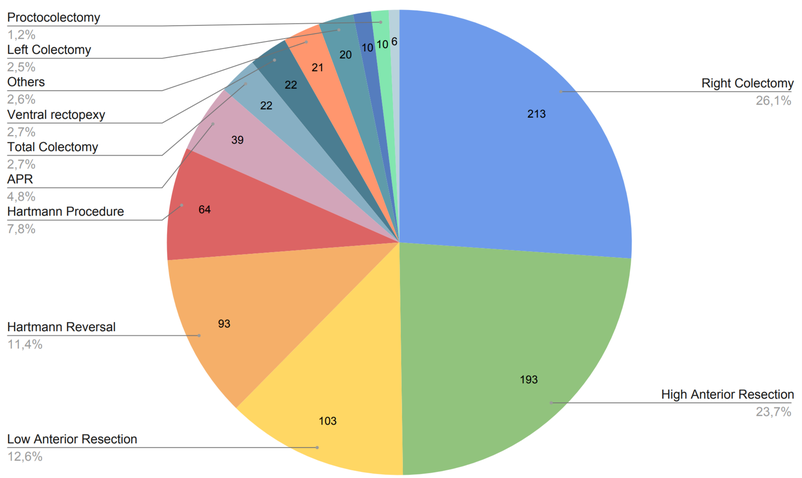
Methods

- Timeframe: January 2014 to July 2023
- N = 816 patients who underwent different laparoscopic colorectal surgeries
- Patient demographics, preoperative characteristics, intraoperative details, and postoperative outcomes were retrospectively collected
- All procedures were perfomed by the same surgical teams in three different academic and non-academic private institutions, ensuring uniformity across cases

Results

Preoperative Characteristics	***n (%), mean (SD)***
Age (years)	61.2 ± 15
Female	468 (57)
BMI 25 - 30	558 (68)
ASA II	622 (77)
Prior abdominal surgery	265 (32)
Indication	
Benign patology	290 (36)
Malignant patology	526 (64)

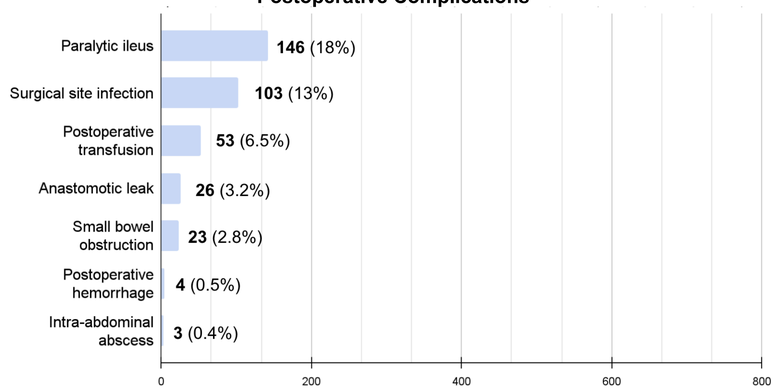
Laparoscopic Colorectal Procedures



Intraoperative Outcomes	***n (%), median (IQR)***
Conversion to open surgery	43 (5)
Technical difficulties	14 (33)
Estimated blood loss < 100 mL	581 (71)
Operative time (min)	120 (60 - 260)
Intracorporeal anastomosis	140 (17)

Postoperative Recovery	***n (%), median (IQR)***
Initiation of oral diet (days)	1 (1 - 6)
Transition to oral analgesia (days)	3 (3 - 4)
Requirement of Surgical ICU	108 (13)
Length of hospital stay (days)	5 (2 - 20)

Postoperative Complications



Postoperative Outcomes	***n (%), median (IQR)***
Reoperation	67 (8.2)
Anastomotic leak	26 (3.2)
30-day readmission	62 (7.6)
30-day or in-hospital operative mortality	27 (3.3)
Non-surgical cause	17 (2.1)

Conclusion

- The successful implementation of laparoscopic colorectal surgery in Latin America, despite resource limitations, highlights the crucial role of structured surgical teams
- Our findings confirm that this approach is feasible and achieves outcomes comparable to those in high-resource settings
- This experience demonstrates the potential for expanding access to advanced surgical techniques in non-academic hospitals
- Strengthening minimally invasive surgery programs in developing regions can lead to improved patient care and surgical outcomes