

LOW ANASTOMOTIC LEAK INCIDENCE AFTER LAPAROSCOPIC COLON RESECTIONS

A 70-PATIENT PROSPECTIVE SERIES

Jorge Gonzalez Serrano MS³, Jesus A. Bahena Aponte MD FACS¹, Monica de Jesus Mosso MD¹, Cindy Belen Larumbe Hernández MD¹, Sari Narsil Angelica Mejia Arcadia MD PhD², Jeanette Jimenez Mora MS³, Quintin Hector Gonzalez Contreras MD FACS¹

Affiliations: 1.Universidad Anáhuac México, Mexico City, Mexico. 2.Mexico, Hospital Central Militar, Mexico City, Mexico. 3.Department of Surgery, San Ángel Inn HMG Hospital, Mexico City.

INTRODUCTION

Anastomotic leak (AL) remains one of the most serious complications after colon resection, contributing to increased morbidity, prolonged hospitalization, and healthcare costs. Although minimally invasive techniques are widely adopted, concerns regarding leak rates persist. Evaluating real-world outcomes is essential to confirm the safety of laparoscopic colon resections.

OBJECTIVE

To evaluate the incidence of anastomotic leak and postoperative outcomes after laparoscopic colon resection in a prospective cohort.

METHODS

Study Design

Prospective observational cohort (March 2021–August 2025)

Population

70 consecutive adult patients undergoing colon resection with primary anastomosis

Setting

Three private hospitals

Primary Endpoint

30-day anastomotic leak

Secondary Outcomes

- Reoperation
- Readmission
- Postoperative complications (Clavien–Dindo)
- Length of stay (LOS)

Statistical Analysis

Continuous variables summarized as median (IQR); categorical variables as proportions.

RESULTS

Key Findings

- Total patients: **70**
- >90%** laparoscopic approach
- Median LOS: **3 days (IQR 2–4)**
- Anastomotic leak: **5.7% (4/70)**
- 0% mortality**

Characteristic	Value
Anastomotic leak, n (%)	4 (5.7%)
Reoperation, n (%)	3 (4.3%)
Readmission within 30 days, n (%)	4 (5.7%)
Postoperative complications, n (%)	10 (14%)
Severe complications (Clavien–Dindo ≥III), n (%)	3 (4.3%)
Length of hospital stay, days (median, IQR)	3 (2–4)
Mortality, n (%)	0

Table 1. Postoperative outcomes after colon resection with primary anastomosis (n = 70).

CONCLUSION

Laparoscopic colon resection demonstrated a low anastomotic leak rate (**5.7%**) with short hospital stay and minimal severe complications. These findings support minimally invasive colon surgery as a safe and effective standard approach in routine clinical practice.

CLINICAL IMPLICATIONS

- Supports laparoscopy as standard of care for colon resections
- Demonstrates feasibility of early discharge pathways
- Suggests protective stomas may not be routinely necessary in well-selected patients

REFERENCES

