ROBOTIC-ASSISTED RIGHT HEMICOLECTOMY WITH COMPLETE MESOCOLIC EXCISION: FIRST EXPERIENCE COMPARED TO CONVENTIONAL ROBOTIC RIGHT HEMICOLECTOMY IN A SINGLE NON-ACADEMIC INSTITUTION

Roberto Secchi, M.D; Victor G Pena, M.D; Eli Castillo M.D; Diego Marines, M.D, FACS, FASCRS.

Introduction

Colorectal cancer is currently ranked as the 3rd highest in incidence and 2nd place for mortality out of all cancer.
Performing a CME with minimally invasive techniques allows:

- A correct identification of critical anatomical segments
- Perform a complete lymphadenectomy
- Ensure the correct plane of dissection

Purpose

The aim of this study was to compare the feasibility, efficacy, and safety of performing a complete mesocolic excision compared to a conventional right colectomy, in a single, non-academic institution

Methods

- Comparative retrospective study
- 10 patients who underwent a robotic-assisted right hemicolectomy versus 2 patients who underwent robotic-assisted right colectomy with complete mesocolic excision was performed
- All cases were performed using a robotic platform by a single board-certified colorectal surgeon in a non-academic institution
- All patients were placed on a standardized enhanced recovery program.

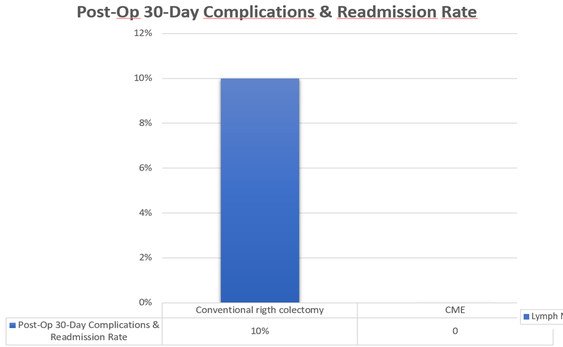
Background

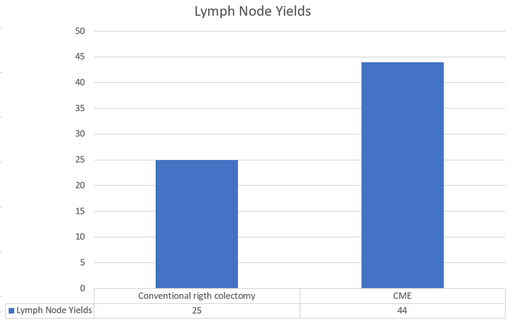
- 1980's: Heald et al. introduced a new technique to treat rectal cancer and labeled it Total Mesorectal Excision (TME)
  - A rectal and mesorectal resection in an intact envelope that covers the tumor, blood, lymphatic vessels, and regional lymph nodes
- 2010's: Hohenberger et al. described complete mesocolic excision with Central Vascular ligation
  - A sharp dissection of the mesocolic plane creating an intact envelope with a high tie of colonic veins and arteries called central vascular ligation (CVL) is performed at the level of the superior mesenteric artery (SMA).
  - The proximal ligation of vessels, allows a greater quantity of lymph to be retrieved
- Robotic-assisted surgery allows the easier identification of critical structures
- Perform a complete lymphadenectomy
- Easier identification of the appropriate plane of dissection

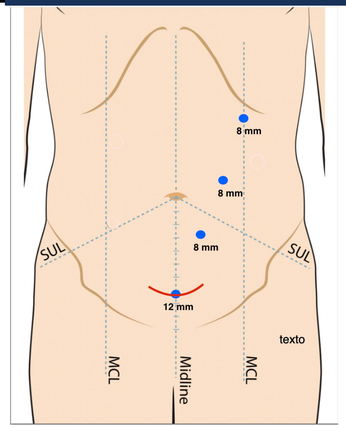
Results

Retrospective chart review of 12 patients:
- 10 patients underwent conventional right colectomy
- 2 patients underwent CME

- Mean operative time was slightly longer on CME (215 min vs 192 min)
- Postoperative 30-day complications and readmission rates were significantly decreased in the CME group (0 vs 10%)
- Number of lymph node yields was significant higher on CME group (mean 44 vs 25)
- Length of stay (2 vs 1.5 days)
- There were no intraoperative complications on either group







Discussion

Pros	Cons
✓ Greater quantity of lymph nodes harvest	• Extensive length of procedure
✓ Better staging	• The added operative time may lead to complications
✓ More personalized treatment	• This study was limited to a low population
✓ Robotic technology allows a better identification of critical structures	• More randomized control trials are need

Conclusions

When comparing the number of lymph nodes retrieved robotic CME showed a higher number of lymph nodes dissected without an increase in complications, and only a mean increase of 21 minutes to the total operative time. The CME technique is a feasible and safe alternative to perform even in the setting of a non-academic institution.