Robotic Cytoreductive Surgery with Heated Intraperitoneal Chemotherapy for Low Grade Appendiceal Mucinous Neoplasm

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Introduction

Cytoreductive surgery with heated intraperitoneal chemotherapy (CRS-HIPEC) is an established treatment for multiple abdominal mucinous neoplasms. CRS-HIPEC is traditionally performed via an open approach given the dissection required during the cytoreduction. There have been reports of minimally invasive HIPEC, but CRS to an accepted completeness of cytoreduction (CCR) has been described less frequently.

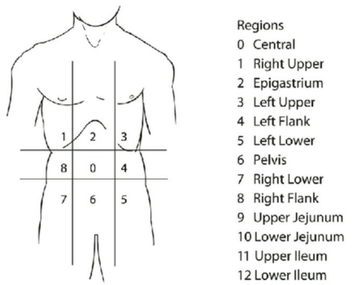
Methods

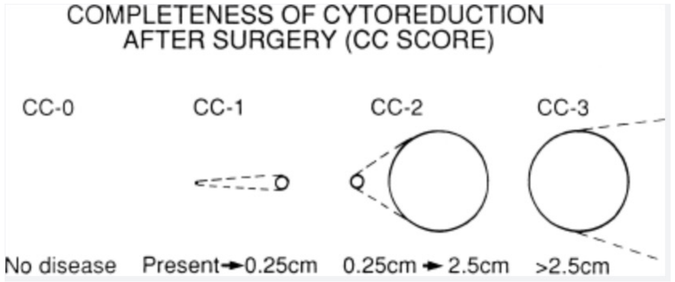
We describe the treatment of a patient with low grade mucinous appendiceal neoplasm (LAMN) with metastatic disease to the peritoneum including diagnostic laparoscopy followed by robotic CRS-HIPEC.

Results

A 49-year-old male presented with presumed appendicitis and underwent appendectomy. Mucin was noted around appendix, and pathology revealed LAMN. The patient subsequently underwent robotic right hemicolectomy. The patient was referred to our center for consideration of CRS-HIPEC. We performed a diagnostic laparoscopy to determine a peritoneal cancer index (PCI) score of 5. Given the small amount of peritoneal disease, he was deemed a candidate for robotic CRS-HIPEC. Mucin was identified in bilateral lower quadrants. The diaphragms, stomach, small bowel, and pancreas were disease-free. An omentectomy was performed. Bilateral sidewall peritonectomies performed to remove disease noted there. CCR score of 0 obtained. The patient was perfused with 30 mg/m^2 with mitomycin-C for 90 minutes at 41° Celsius. His postoperative course was uneventful, and he has no evidence of recurrence currently.

PCI and CCR





Conclusion

This case shows the feasibility of robotic-assisted CRS-HIPEC for select LAMNs. PCI is the key factor in achieving a CCR score of 0 robotically. When appropriately selected, we advocate for the continued use of this minimally invasive approach.

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