

## **Which is the Optimal Method of Reconstruction After Laparoscopic Right Hemicolectomy, the Intracorporeal or Extracorporeal Anastomosis Technique?**

### **Technical Considerations, Lessons Learned and Review of the Literature**

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### **Abstract**

*Introduction:* The laparoscopic approach to right colectomy is gradually gaining a leading role in the surgical treatment of right colonic diseases. However, not all aspects of the procedure are standardized and the method of reconstruction of the digestive tract is still under debate. The present study critically evaluates the extracorporeal (EA) and intracorporeal (IA) techniques used for creation of the ileocolic anastomosis during a laparoscopic right colectomy.

*Material and Method:* The EA and IA anastomotic techniques are described in detail. The peri-operative data of a cohort of consecutive patients operated by our surgical team was retrospectively recorded and analyzed regarding type of anastomosis, the path for transition from EA to IA and the incidence of postoperative complications. Furthermore, an analysis of randomized clinical trials, reviews and meta-analyses that provided a comparative evaluation of EA versus IA was performed to provide a more in-depth integration of our own data into the literature.

*Results:* EA was used at the beginning of our experience but was later replaced by IA which became the favorite anastomotic technique. There was no anastomotic fistula recorded in the EA or IA groups but in our cohort IA was unexpectedly associated with higher incidence of peritoneal drainage, prolonged ileus, surgical site infections, anastomotic bleeding and chyloperitoneum. However, IA allows better visualization of the ileal and colonic stumps, avoids twisting of the anastomosis, prevents extraction-related tearing of the mesocolon and reduces the risk of postoperative hernia. Data from the literature also shows that IA is generally associated with earlier postoperative return of bowel function, less morbidity and less postoperative pain.

*Conclusions:* Based on this study and the data currently present in the literature it can not be concluded that IA should be considered as the standard of care for laparoscopic right colectomy. The decision for an EA or IA anastomosis ultimately belongs to the surgeon and is influenced by his surgical skill and experience. The results of ongoing randomized controlled trials on large group of patients may bring more clarity on this issue in the future.

**Key words:** laparoscopic surgery, right colectomy, intracorporeal anastomosis