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Title

Robotic-Assisted Low Anterior Resection With Transanal Extraction: Single Stapling Technique And Fluorescence Evaluation Of Bowel Perfusion.

Permalink

<https://escholarship.org/uc/item/4k42q10w>

Journal

Diseases Of The Colon & Rectum, 58(5)

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Publication Date

2007-05-01

DOI

10.1097/01.dcr.0000853848.17594.9f

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Peer reviewed

**ROBOTIC-ASSISTED LOW ANTERIOR
RESECTION WITH TRANSANAL
EXTRACTION: SINGLE STAPLING
TECHNIQUE AND FLUORESCENCE
EVALUATION OF BOWEL PERFUSION.**

(WV6)

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Purpose: This video aims to describe the use of Indocyanine green (ICG) fluorescence technology to delineate bowel perfusion and to describe the technical aspects of transanal extraction with single stapling technique of the colorectal anastomosis for low anterior resection.

Methods: This is a 50 year-old male with T2N0 rectal cancer who is taken to the operating room for robotic-assisted laparoscopic low anterior resection with transanal extraction and the use of Indocyanine Green fluorescence (ICG).

Results: Patient is positioned in modified lithotomy. A laparoscopic medial to lateral dissection of the descending colon and rectum is performed. After high ligation of the inferior mesenteric vein and lateral and splenic mobilization of the colon, the four-arm Da Vinci robot is docked. The inferior mesenteric artery is divided. A total mesorectal excision of the rectum down to the anal canal is performed. The optimal point of transection is then marked by the surgeon under white (visible) light followed by intravenous injection of 6-8 mg of ICG. The bowel is then visualized via near infrared laparoscopy and the point of transection of the proximal is revised based on optimal bowel perfusion. The specimen is extracted via a wound protector through the anus and divided extracorporeally. An anvil is secured to the descending colon and is returned to the abdomen. A purse string is then secured to the rectal stump and tied around the open spike of the end to end stapler. An end-to-end colorectal anastomosis is performed. Flexible sigmoidoscopy reveals pink mucosa and a negative air-leak test.

Conclusions: This video demonstrates the feasibility and advantages of the use of fluorescence imaging during creation of anastomosis; the advantages of endoscopic imaging to delineate integrity of the anastomosis as well the technique with regards to creating a single staple anastomosis and transanal extraction during a low anterior resection.