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Fully Robotic Resection of a Splenic Flexure Tumor with Intracorporeal Anastomosis

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Surgical resection of splenic flexure tumors (SFT) is challenging due to the proximity of the spleen, stomach, and pancreas and the dual blood supply from the superior and inferior mesenteric vessels.^{1,2} A minimally invasive approach to SFT resection offers the advantage of avoiding a large incision that is required for an open extended right colectomy or an open segmental left colectomy.^{3,4} Complete mesocolic excision of SFT using conventional laparoscopic instruments is technically challenging and requires specialized training and expertise for an oncologically sound outcome.⁵ Robotic technology is particularly well suited for segmental splenic flexure colectomy because its enhanced precision and visualization facilitate dissection around important anatomical structures, with control of the left colic vessels and the left branch of the middle colic vessels.

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"Robotic resection of a splenic flexure tumor" by @DrGarciaAguilar @ffquezad @sloan_kettering #ColorectalResearch @DCRjournal <http://bit.ly/1234567>

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Supplemental Digital Content 1. Video of a Fully robotic resection of a splenic flexure tumor with intracorporeal [anastomosis.mov](#)

A fully robotic SFT resection with single docking begins with identification of the inferior mesenteric vein (IMV) at the level of the angle of Treitz. Dissection starts directly over the IMV, preserving this vessel for adequate venous drainage of the sigmoid colon and rectum. The left colic artery (where it crosses over the IMV) and the left colic vein are divided. Next, the origin of the middle colic vessels is identified, and the left branches of the middle colic artery and vein are divided. Dissection continues under the mesentery and over the pancreas, until the splenic hilum is reached. The sigmoid colon is fully mobilized from medial to lateral. A complete takedown of the splenic flexure is performed, and the omentum is resected from the mid-transverse colon. Indocyanine green fluorescence is used to determine the limits of the segment to be sectioned. A tension-free side-to-side isoperistaltic intracorporeal anastomosis is created with the EndoWrist® Stapler System via a trocar at the Pfannenstiel incision. Blood supply to the anastomosis is tested with indocyanine green fluorescence. (see Supplemental Digital Content 1).

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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