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VIDEO

Robotic complete mesocolic excision for right-sided colon cancer

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Abstract Complete mesocolic excision (CME) with central vascular ligation for right-sided colon cancer has been proven to provide superior oncologic outcomes and survival advantage when compared to standard lymphadenectomy [1]. A number of studies comparing conventional laparoscopic versus open CME have shown feasibility and safety of the laparoscopic approach with acceptable oncological profile and postoperative outcomes [2, 3]. The introduction of robotic systems with its technical advantages, including improved vision, better ergonomics and precise dissection, has further revolutionized minimally invasive approach in colorectal surgery. However, there seems to be a relatively slow adoption of robotic approach in the CME technique for right-sided colon cancer. This video demonstrates our detailed operative technique and feasibility for performing right-sided CME robotically. The surgical procedure is performed with a medial-to-lateral approach through four 8-mm robotic and one assistant ports. First, the ileocolic vessels are isolated, clipped and transected near their origins. Cephalad dissection continues along the ventral aspect of the superior mesenteric vein. Staying in the embryological planes between the mesocolon and retroperitoneal structures, mesenteric dissection is extended up to the root of the right colic vessels, if present, and the middle colic vessels, which are clipped and divided individually near their origins. After the terminal ileum is transected using an endolinear staple, the colon is mobilized fully from gastrocolic tissue and then from its lateral attachments. The transverse colon is transected under the guidance of near-infrared fluorescence imaging. Creation of an intracorporeal side-to-side ileotransversostomy anastomosis and extraction of the specimen complete the operation. We consider robotic CME to be feasible, safe and oncologically adequate for the treatment of right-sided colon cancer. Its technical advantages may lead to further dissemination of the robotic approach and better standardization of this surgical technique.

Keywords Right-sided colon cancer · Complete mesocolic excision · Robotic surgery

Compliance with ethical standards

Disclosures Volkan Ozben, Bilgi Baca, Deniz Atasoy, Onur Bayraktar, Afag Aghayeva, Turgut Bora Cengiz, Ilknur Erguner, Tayfun Karahasanoglu and Ismail Hamzaoglu have no conflicts of interest or financial ties to disclose.

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