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ORIGINAL ARTICLE – COLORECTAL CANCER

Robotic Extended Right Hemicolectomy with Complete Mesocolic Excision and D3 Lymph Node Dissection

Irbaz Hameed, MBBS, Piyush Aggarwal, MBBS, and Martin R. Weiser, MD

Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY

ABSTRACT

Background. Recent studies have shown the benefits of complete mesocolic excision and extended lymphadenectomy (D3 lymph node dissection) in patients with colon cancer.[1–3]

Methods. We present the case of a 62-year-old male with hepatic flexure adenocarcinoma. No metastatic disease was identified by computed tomography. A robot-assisted extended right hemicolectomy with complete mesocolic excision, D3 lymph node dissection, and resection of the mesentery with intact visceral peritoneum was performed.

Results. The trocars are placed in the right lower (8 mm), lower midline (8 mm), and left upper (12 mm) quadrants. The camera port is placed superior to the umbilicus, and the assistant port is placed in the left lower quadrant. The robotic right lower port is used to place the cecum on tension in order to outline the ileocolic pedicle. The assistant retracts the transverse colon cephalad to outline the superior mesenteric artery and vein. Using two robotic arms, the surgeon begins dissection over the superior mesenteric vein inferior to the ileocolic pedicle. Cephalad dissection along the superior mesenteric vein proceeds with reflection of the mesentery and D3 lymph nodes laterally to allow en bloc resection. The ileocolic and middle colic vessels are identified, ligated and divided at their origins. The plane is then developed between the right colon mesentery and the retroperitoneum, including Gerota's fascia, duodenum, and head of the pancreas, in a medial-to-lateral fashion, with care taken to ensure an intact visceral peritoneum is maintained. The proximal transverse colon, hepatic flexure, and ascending colon are mobilized by taking down lateral attachments. The intervening mesentery is transected, and perfusion is assessed with indocyanine green fluorescence imaging. An intracorporeal, isoperistaltic, side-to-side anastomosis is performed using the 45-mm robotic stapler. The common enterotomy is sewn closed in two layers. Pathology showed T3N0 adenocarcinoma with all negative margins.

Conclusion. Extended right hemicolectomy with complete mesocolic excision and D3 lymph node dissection is facilitated by a robotic approach, which improves visualization and instrument dexterity.

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DISCLOSURE Irbaz Hameed, Piyush Aggarwal, and Martin R. Weiser have no conflicts of interest to declare.

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M. R. Weiser, MD
e-mail: weiser1@mskcc.org

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