Transthoracic Port Placement Increases Safety of Total Laparoscopic Posterior Sectionectomy

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ABSTRACT

Background. Anatomic posterior sectionectomy is performed infrequently due to the challenges of controlling the right posterior portal pedicle (RPPP) while preserving the anterior pedicle (RAPP), difficulty of visualizing the drainage of the right hepatic vein into the IVC, and the potential for significant blood loss during the caval and hepatovenous dissection.

Patient. A 62-year-old woman with three liver metastases to SVI and SVII from sigmoid colon cancer underwent five cycles of neoadjuvant chemotherapy with FOLFOX and bevacizumab with good response. She underwent a “Primary First” robotic low anterior resectosigmoid resection followed by a laparoscopic posterior sectionectomy.

Technique. The patient was placed in a Modified French Position. As previously described, a transthoracic trocar was placed for optimal laparoscopic visualization and

access of the superior retrohepatic IVC and drainage of the right hepatic vein into IVC. Intraoperative ultrasound was crucial to assess tumor location, define transection plane, and preserve flow to RAPP before division of RPPP. The parenchymal transection follows an oblique angle and exposes the right hepatic vein.

Conclusions. Transthoracic port placement augments the safety of the dissection along the IVC inferiorly and the right hepatic vein superiorly due to direct visualization. Also, it provides a direct instrument-to-target axis without the typical fulcrum of dissecting the postero/superior liver. Laparoscopic ultrasound is critical to confirm preserved flow to the RPPP and guide the parenchymal transection. Liver volumetry should be obtained before surgery to determine adequate future liver remnant if conversion to a right lobectomy becomes necessary.

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