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Techniques to perform robotic left adrenalectomy in the obese patient

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Abstract

Introduction—Minimally invasive adrenalectomy may be associated with reduction in postoperative pain, morbidity, and length of stay and, as a result, has become a preferred approach for many adrenal tumors. Left-sided adrenal tumors, however, are particularly challenging to address in the morbidly obese patient due to difficulties in maintaining exposure and dissection. The robotic platform offers instruments with greater degrees of freedom that aid in retraction and dissection, especially of the adrenal vein, but fixed patient positioning and the large distance needed between patient ports to avoid arm collisions can be restrictive in patients with a large amount of retroperitoneal fat and small working space.

Methods/Results—We demonstrate robotic left adrenalectomy (RLA) in a consecutive series of patients with a mean weight of 99 kg and mean BMI of 36. Techniques to safely and efficiently perform RLA in obese patients are stepwise demonstrated, including (1) Patient positioning, (2) Management of the pannus, (3) Customized port placement, (4) Medial retraction of the pancreas, (5) Finding the left adrenal vein, and (6) Management of bleeding. Intraoperative videos from multiple patients also show surgical pitfalls, examples of poor port placement, arm collisions, alternative approaches to the vein, and techniques to control unexpected bleeding. All patients in the series underwent successful RLA with negative margins, no major intra- or postoperative complications, and discharge on POD 1–2.

Conclusion—Though poor exposure due to patient body habitus is a relative contraindication, even large left-sided adrenal tumors can be safely approached robotically while adhering to oncologic principles, as is demonstrated in this video.

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This video was presented, in part, as an oral presentation at the American College of Surgeons Clinical Congress 2015, Chicago, IL.

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Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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