Surgical Oncology 31 (2019) 7

Contents lists available at ScienceDirect

Surgical Oncology

journal homepage: www.elsevier.com/locate/suronc

Robotic-assisted laparoscopic retroperitoneal adrenalectomy

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1. Introduction

A robotic approach to adrenal surgery has been shown to be safe and effective, and is typically performed in a transperitoneal fashion [1]. Retroperitoneal surgery avoids entry into the peritoneal cavity, obviating the need for lysis of intra-abdominal adhesions and mobilization of visceral organs [2,3]. This video demonstrates a step-by-step technique for performing a robotic retroperitoneal adrenalectomy. We present a sample case and share our institutional outcomes.

2. Methods

A 57-year-old female presented with a right adrenal mass and biochemical markers supportive of pheochromocytoma. She underwent a robotic-assisted laparoscopic right adrenalectomy, with the steps of the procedure presented in this.

We retrospectively gathered demographic data, as well as perioperative and oncologic outcomes from the robotic retroperitoneal adrenalectomy cases performed at our institution.

3. Results

Four cases were reviewed, one of whom underwent partial adrenalectomy. Two patients had renal cell carcinoma with solitary adrenal metastasis and 2 patients had pheochromocytoma. The mean age was 63.5 years and mean BMI was 31.1. Mean operative time was 124 minutes (range: 111–154) and mean estimated blood loss was 60 mL (range: 10–100). Three out of 4 patients were discharged home on postoperative day 1. No patients had disease recurrence at a mean follow-up time of 16.3 months (range: 4.1–24.5).

4. Conclusions

Robotic retroperitoneal adrenalectomy is feasible and safe. This approach allows the surgeon to avoid the peritoneal cavity while achieving good perioperative results, without compromising oncologic outcomes.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.suronc.2019.06.005.

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https://doi.org/10.1016/j.suronc.2019.06.005
Received 11 January 2019; Received in revised form 19 April 2019; Accepted 21 June 2019
Available online 22 June 2019
0960-7404/