Posterior Retroperitoneoscopic Resection of Extra-adrenal Paraganglioma Located in the Aorto-caval Space

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ABSTRACT

Background. The posterior retroperitoneoscopic adrenalectomy has several advantages compared with the transperitoneal approach such as a shorter and more direct route to the target organ, no breach of the intraperitoneal space, and no required retraction of the adjacent organs. It also is a safe procedure with a short learning curve.^{1–5} This report presents a challenging case of an extra-adrenal paraganglioma located in the aorto-caval space and managed using the retroperitoneal approach.

Methods. A 39-year-old man was placed in the prone jackknife position, and three incisions were made in the right posterior abdominal wall for placement of the laparoscopic ports. The retroperitoneal space was entered with diathermy and blunt finger dissection, and retroperitoneum was achieved with carbon dioxide insufflation pressure up to 18 mmHg. After identification of the right kidney and vessels, the tumor was meticulously dissected and excised with an energy device. The specimen was removed using a laparoscopic specimen retrieval bag, and the port sites were closed in layers.

Results. The operative time was 130 min, and the total blood loss was 30 ml. The tumor was diagnosed as a moderately differentiated extra-adrenal paraganglioma.

The Von Hippel-Lindau gene mutation was detected using next-generation sequencing.

Conclusions. The posterior retroperitoneoscopic approach is a safe, feasible, and effective method for excising an extra-adrenal paraganglioma even in the aorto-caval space. The authors suggest that this procedure is a useful surgical option for treatment of an aorto-caval paraganglioma for selected patients and by experienced surgeons.

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