AB200. SOH22ABS093. Perioperative management of a robotic adrenalectomy for a large noradrenaline dominant phaeochromocytoma: a case report and literature review

Alison Deasy[1], Jasmine Aziz[1], James O'Driscoll[1], Kevin Doody[1], Audrey Melvin[2], Eoin Noctor[2], Subhasis Giri[3], Catherine Nix[1]

[1]Department of Anaesthesia, Critical Care and Pain Medicine, University Hospital Limerick, Limerick, Ireland; [2]Department of Endocrinology, University Hospital Limerick, Limerick, Ireland; [3]Department of Urology, University Hospital Limerick, Limerick, Ireland

Background: Phaeochromocytoma is a rare, catecholamine-secreting, neuroendocrine tumour, occurring in less than 0.2 percent of patients with hypertension. Although the clinical manifestation of phaeochromocytoma varies, predominant symptoms include episodic hypertension, headaches, sweating, and tachycardia. This clinical picture is attributed to a blend of alpha- and beta-adrenergic effects with alpha effects predominating. With the developments in operative techniques, minimally invasive adrenalectomy has become the mainstay of therapy for patients with phaeochromocytoma.

Methods: Due to advances in perioperative care, efforts have been made to prevent the occurrence of hypertensive episodes, especially during induction of anaesthesia, pneumoperitoneum creation, and adrenal gland manipulation. Nevertheless, hypotensive episodes resulting from catecholamine withdrawal are difficult to avoid during phaeochromocytoma resection and can lead to significant complications. These episodes generally necessitate high dose vasopressor and inotropic therapy despite adequate intravascular volume expansion.

Results: We describe a case of a large, predominantly noradrenaline-secreting, phaeochromocytoma in a 75-year-old male who underwent a robot-assisted laparoscopic right-sided adrenalectomy. The clinical history, medical preparation and hospital course of the patient are presented. Unusually, this patient's tumour was diagnosed after a retroperitoneal bleed brought about by a hypertensive crisis. Urinary metanephrine levels were significantly elevated.

Conclusions: We outline the management of a hypotensive crisis that ensued after resection of the tumour from the adrenal bed. The preoperative use of reversible alpha-blockade, the use of calcium gluconate to reverse the effects of a perioperative infusion of magnesium sulphate, and successful closed loop communication with the surgical team may have been key in treatment.

Keywords: Adrenalectomy; neuroendocrine tumour; noradrenaline dominant phaeochromocytoma; perioperative management; robotic

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

doi: 10.21037/map-22-ab200

Cite this abstract as: Deasy A, Aziz J, O'Driscoll J, Doody K, Melvin A, Noctor E, Giri S, Nix C. AB200. SOH22ABS093. Perioperative management of a robotic adrenalectomy for a large noradrenaline dominant phaeochromocytoma: a case report and literature review. Mesentery Peritoneum 2022;6:AB200.