

AB107. 149. Peri-operative anaesthetic management of Ireland's first robotic assisted adrenalectomy for pheochromocytoma

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Abstract: We present a 36-year-old female who underwent elective adrenalectomy for an adrenaline and dopamine-dominant pheochromocytoma; the first robotic-assisted adrenalectomy performed in Ireland. Diagnosed on the basis of abnormal urine catecholamine levels and CT-Brain/TAP that revealed a 4-cm lesion on her left adrenal gland, she was referred to urology department, UHL for adrenalectomy. Pre-operative management was a coordinated effort involving the urology, endocrine and anaesthetic teams. Pre-operatively, irreversible alpha-blockade (phenoxybenzamine 20 mg twice daily bd) followed by beta-blockade (atenolol 25 mg once daily od) proved effective. Withdrawal of same and fluid loading was undertaken pre-op, with final dose of phenoxybenzamine (10 mg) administered 36 hours pre-op. Arterial access was established prior to

induction with midazolam 1 mg/fentanyl 500 mcg/propofol 50 mg/rocuronium 50 mg with topical lidocaine to vocal cords. Video-laryngoscopy was used to avoid hypertensive surges. A central venous catheter (internal jugular) was inserted for CVP-monitoring and inotropes/electrolyte replacement with a transoesophageal-echo probe placed to monitor cardiac function/fluid responsiveness. Haemodynamics were maintained with fluid boli and variable rate magnesium sulfate/remifentanyl/sodium nitroprusside/vasopressin infusions with intermittent boli of magnesium sulphate (0.5 g)/ vasopressin (0.5 U) as required. Sinus tachycardia was also managed with esmolol boli. Robotic approach aimed to minimize manipulation of the tumour while attenuating the systemic inflammatory response with large surgical incisions. Rebound hypotension encountered with tumour explantation was managed with a variable rate vasopressin and continuous noradrenaline infusions. Cumulatively, 12 g of magnesium sulphate was administered, with calcium chloride to reverse the effects of same prior to extubation. With a multi-disciplinary approach, robotic-assisted adrenalectomy can be performed safely in an Irish setting.

Keywords: Pheochromocytoma; anaesthesia; robotic surgery; urology; endocrinology

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