

Anaesthetic Management of Men2a Syndrome: A Case Report on Laparoscopic Left Adrenalectomy Followed by Total Thyroidectomy with Parathyroidectomy

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Abstract: This case report discusses the anesthetic management of a 59-year-old female diagnosed with MEN2A, undergoing a two-part surgery: laparoscopic left adrenalectomy followed by total thyroidectomy with parathyroidectomy. The patient presented with hypertension and palpitations. Intraoperative hypertension was successfully managed with nitroglycerin infusion and esmolol. A flexometallic tube was used during the thyroidectomy with parathyroidectomy. The report highlights the perioperative challenges and the strategies employed to ensure patient safety and optimal surgical outcomes.

Keywords: Pheochromocytoma, MEN2A syndrome, Medullary thyroid carcinoma

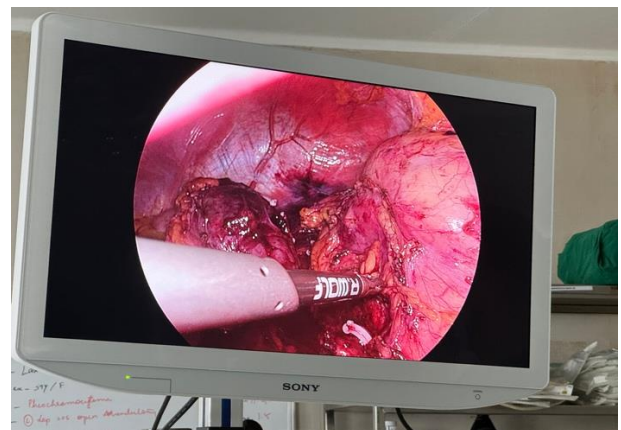
1. Introduction

Multiple Endocrine Neoplasia type 2A (MEN2A) is a genetic disorder characterized by the presence of medullary thyroid carcinoma, pheochromocytoma, and hyperparathyroidism¹. Surgical management often involves adrenalectomy for pheochromocytoma and thyroidectomy for medullary thyroid carcinoma. Anaesthetic management is challenging due to the risk of intraoperative hypertensive crises and the need for meticulous perioperative care.

Preoperative Findings

Patient History: 59-year-old female with a history of hypertension and palpitations. **Preoperative Investigations:** Elevated catecholamine levels (elevated urinary metanephrine), imaging studies confirming adrenal tumor of 4 cm and multiple thyroid, parathyroid nodules, there was hypercalcemia and thyroid levels were normal

Intraoperatively: On the day of surgery, the patient was premedicated with midazolam for anxiolysis. In the operating room, standard ASA monitoring was employed along with invasive arterial and central venous pressure monitoring. General anesthesia was induced with etomidate and fentanyl, and maintained with sevoflurane. Nitroglycerin infusion and esmolol was used to manage intraoperative hypertension. Pneumoperitoneum and tumor manipulation posed significant hemodynamic challenges, requiring prompt adjustments in anesthetic depth and vasoactive drug administration. A flexometallic tube was used during the thyroidectomy with parathyroidectomy.





Postoperative Findings

Immediate Recovery: Stable hemodynamics post - surgery.

Postoperative Care: Monitoring for hypocalcemia, maintaining airway patency, and managing pain.

Follow - up: Regular endocrine evaluation and management of any residual or recurrent disease.

2. Discussion

Managing MEN2A patients poses significant challenges due to the potential for severe hypertension and hemodynamic instability². Preoperative preparation must include thorough endocrine evaluation and optimization. Intraoperative management should focus on maintaining hemodynamic stability, particularly during tumor manipulation³. The choice of anesthetic agents and techniques plays a critical role in patient outcomes.

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