

## CORRESPONDENCE

## DIFFICULT AIRWAY

# Difficult airway plus a diseased spine: perioperative challenges after thyroidectomy

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Dear Editor,

We present the perioperative challenges in a 70-year-old female with metastatic papillary thyroid carcinoma (PTC) who required posterior spinal decompression for complete L2 vertebral collapse and severe canal stenosis. PET-CT demonstrated FDG-avid lesions in the vertebra, acetabulum, and inguinal lymph nodes, reflecting disseminated metastatic thyroid carcinoma and a pattern associated with significant neurological morbidity and complex perioperative management.<sup>1</sup>

Two weeks earlier, the patient had undergone total thyroidectomy and subsequently developed bilateral abductor vocal cord palsy, a rare but potentially dangerous postoperative complication due to the risk of airway obstruction and extubation failure.<sup>2</sup> In preparation for radioactive iodine therapy, she was intentionally rendered hypothyroid. The hypothyroid state is known to prolong drug metabolism, enhance sensitivity to anaesthetic agents, and extend neuromuscular blockade, mandating cautious titration of anaesthetic medications during induction and maintenance.<sup>3</sup>

During the initial surgical attempt, after induction of general anaesthesia and videolaryngoscopy assisted intubation performed due to her restricted mouth opening and edentulous status, the right internal jugular vein cannulation unexpectedly resulted in the aspiration of pus, triggering abrupt hypotension and necessitating abandonment of the procedure. Neck ultrasonography later revealed deep postoperative collections, including one adjacent to the internal jugular vein. Although uncommon, postoperative neck infections after thyroidectomy must be actively excluded when patients exhibit unexplained hemodynamic instability, neck

swelling, or systemic symptoms.<sup>4</sup> Identification and evaluation of these collections prompted a period of optimisation before rescheduling the procedure. A left internal jugular venous access was established during this period.

At reattempt, difficult airway management with videolaryngoscopy was successful; however, existing vocal cord palsy required heightened preparedness for extubation-related complications. Vecuronium was administered in reduced doses due to the previously observed prolonged neuromuscular recovery. Invasive arterial monitoring was instituted given the earlier intraoperative hypotension. Anaesthesia was maintained with isoflurane and appropriately titrated vasopressor support. Sugammadex provided reliable and rapid reversal of neuromuscular blockade, facilitating safe extubation and reducing the risk associated with postoperative airway compromise, consistent with evidence supporting its utility in high-risk thyroid and spine surgeries.<sup>5,6</sup> Comparable perioperative scenarios involving thyroid malignancy and metastatic spinal disease have underscored the importance of multidisciplinary coordination in optimizing outcomes.<sup>7</sup>

This case highlights the need for meticulous preoperative reassessment after recent thyroid surgery, early recognition of neck sepsis, and careful tailoring of anaesthetic management in hypothyroid patients undergoing major spinal procedures. Individualized drug dosing, vigilant monitoring, and advanced airway preparedness played crucial roles in achieving a favourable perioperative outcome in this high-risk patient.

## Conflict of interest

Nil declared by the authors

### Authors' contribution

All authors took part in the management of the case and preparation of the manuscript/

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