

Airway plan algorithm in a massive thyroid tumour

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Effective collaboration and meticulous forward planning by the ENT surgeon and anaesthetic staff are required in the shared airway management of patients with large head and neck malignancies. There are many algorithms available for guidance in difficult airway management such as the Votrex approach, Austin Hospital and Strayer airway algorithms.

We present the case of a 58-year-old lady who required a unique induction airway plan due to a massive Hurthle cell carcinoma of the thyroid.

The patient underwent a total laryngectomy, thyroidectomy and free flap reconstruction of the surgical defect. The tumour arose from the right thyroid lobe, was 12 x 10 x 9 cm and showed macroscopic invasion of the laryngeal and tracheal cartilages on computed tomography (CT), with deviation and compression of the proximal trachea (Figure 1). She was morbidly obese, with a short neck, poor mouth opening and biphasic stridor at rest.

Given her challenging airway anatomy, a complex airway plan was formulated with ENT, anaesthetic and cardiothoracic surgical input. The cardiothoracic surgeons inserted the cannula sheaths for extracorporeal membrane oxygenation (ECMO) prior to induction.

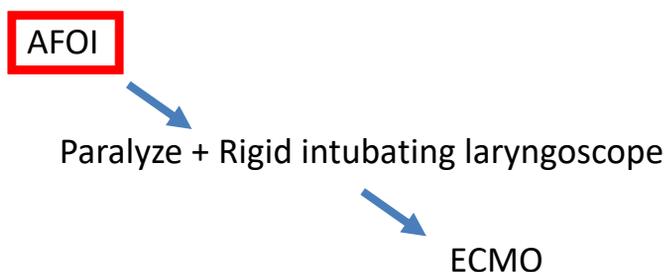
The primary airway plan was for awake fibreoptic nasal intubation (AFOI). If this were to fail, the patient would be paralysed with neuromuscular blockade and an attempt would be made with a rigid laryngoscopy to intubate the patient through and below the tumour mass. Failing this, she would be placed on ECMO.



Figure 1: 3D CT Neck reconstruction; demonstrating subglottic and tracheal stenosis secondary to tumour mass effect

Fortunately, the AFOI was successful, the ECMO cannula were removed and the remainder of the procedure was uneventful from an airway point of view.

This case highlights the importance of forward planning and multidisciplinary input into the shared airway management of challenging patients for best clinical outcomes.



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look back



look forward

