

Management of a symptomatic parturient with a compressive thyroid mass

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- **Background:**

- Thyroid goiters with tracheal compression can pose a challenge for airway management
- Awake fiberoptic intubation is often performed if compressive symptoms (dyspnea, dysphagia, orthopnea) are present due to concern for loss of the airway with induction of general anesthesia
- Some studies suggest large benign goiters can often be intubated without difficulty even with airway compression¹
- In the parturient with clinical and imaging evidence of tracheal compression, additional planning regarding anesthetic and airway management is needed given the possibility of emergent delivery

1. Loftus PA, Ow TJ, Siegel B, Tassler AB, Smith RV, Schiff BA. Risk factors for perioperative airway difficulty and evaluation of intubation approaches among patients with benign goiter. *Ann Otol Rhinol Laryngol*. 2014;123(4):279-285.

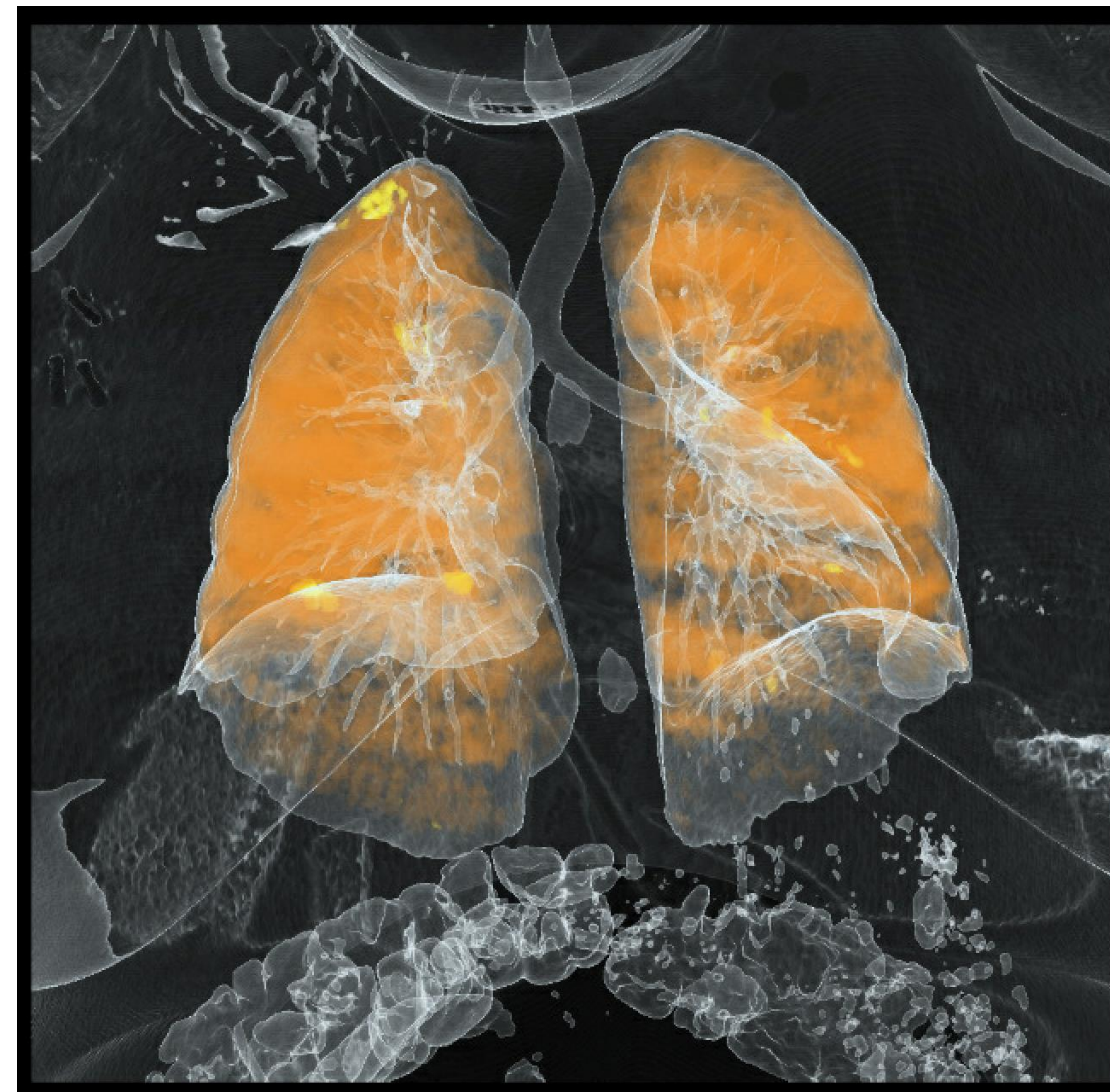
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• Patient:

- 31-year-old G1P0 female with BMI 45 at 37w1d
- Newly diagnosed mediastinal mass
- Patient endorsed dyspnea when lying flat or on her right side
- CT imaging showed a soft tissue mass arising from the thyroid bed and extending into the upper mediastinum
 - **minimum tracheal caliber of 5x14mm**
- Thyroid function tests were normal, felt likely to be benign thyroid goiter
- ENT performed flexible nasal laryngoscopy → **patent upper airway without deviation**
- Primary cesarean section scheduled given concerns for potential difficult airway in emergency → **awake fiberoptic intubation planned** due to anticipated difficulty with positioning for delivery



Case:

- On day of delivery, tolerated nearly supine position without dyspnea and chose to proceed under neuraxial
- Multi-disciplinary huddle: position slightly head up, avoid carboprost, and emergency airway equipment and personnel available
 - video laryngoscope, fiberoptic bronchoscope, multiple sizes of reinforced endotracheal tubes, ENT on backup
- CSE performed with 9mg hyperbaric bupivacaine to reduce risk of high spinal
- Stable during the case with SpO2 above 98% and no complaints of dyspnea
- Post-operative pain control via epidural, and morphine sulfate was deferred given concerns for respiratory depression
- Discharged on postpartum day 4 with plans for future thyroidectomy

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- **Learning Points:**

- Multidisciplinary planning with early communication between the anesthesiology, obstetric and ENT teams for parturients with potentially difficult airways, such as from an airway mass, is essential when planning for delivery
- Emergent or unanticipated delivery can complicate airway management
- Thorough examination of patient's airway and symptoms should be done during preoperative evaluation
- Neuraxial anesthesia with careful monitoring of the patient's airway and symptoms allowed her to be awake during delivery and avoid airway instrumentation
- Appropriate back-up and emergency equipment and personnel should be readily available