

Airway ultrasound

RECOGNIZING WHEN TO USE AIRWAY ULTRASOUND

Did you know it is possible to use ultrasound to help manage airway emergencies? While airway ultrasound is not typically needed for all airway management, there are instances when it can be helpful to troubleshoot difficult situations.

There are two scenarios when we might use airway ultrasound

1. Predicted difficult airway

Patients who need airway management but have potentially difficult airways are an ideal population for airway ultrasound. These may include patients who are obese, or who have abnormal landmarks due to trauma, a history of head and neck surgery, or radiation.

2. Post intubation hypoxia

Airway ultrasound can also help you avoid and evaluate post intubation hypoxia by allowing immediate bedside evaluation of endotracheal tube positioning.

Specific applications

1. Identify surgical airway landmarks

A surgical airway is an uncommon procedure. It can be difficult to palpate the relevant landmarks, particularly in the stressful setting of a failed intubation. Airway ultrasound allows you to identify the landmarks for an incision rapidly and accurately.

This is a technique that should be used when you have time to prepare a double setup with attempted intubation before trying a surgical airway, and not in a crash situation in which an airway is needed immediately.

2. Visualize esophageal placement

Airway ultrasound allows an operator to see esophageal placement of an endotracheal tube during an intubation attempt. This is performed as a two operator technique, with one clinician performing the intubation, and the other monitoring the attempt with ultrasound. This is most useful if video laryngoscopy is not used.

3. Rapidly evaluate tube position

Ultrasound allows rapid assessment of tube positioning. We can detect evidence of a right mainstem intubation by checking for lung sliding.

This is faster than waiting for a post-intubation chest x-ray.

