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# 1<sup>st</sup> Cleveland Clinic Anesthesia & Pain Management *Global Summit*

ABU DHABI • OHIO • FLORIDA • LONDON

November 3 - 5, 2023  
Cleveland Clinic Abu Dhabi



HYBRID EVENT



## Airway & Gastric POCUS: Gastric Ultrasound

### Faculty

Dr. Amit Jain, Anesthesiology Institute Cleveland Clinic Abu Dhabi  
Dr. Jaya Batra, Anesthesiology Institute Cleveland Clinic Abu Dhabi

### Introduction

Pulmonary aspiration of gastric content is a major anesthetic-related complication which may result in significant morbidity and mortality. This is particularly true in high risk patients and situations e.g., inconsistent information about last meal, emergency surgery, and diseases associated with slow gastric emptying. The volume, nature (fluid vs. particulate or solid matter), and acidity of the aspirate are thought to be important factors that determine patient outcomes. Current prevention strategies rely mainly on recommended fasting periods for elective surgery i.e., NPO protocol. However, underlying medical conditions that slow gastric emptying can predispose patients to greater amount of gastric content at the time of anesthetic induction despite appropriate fasting intervals. Increasing number of studies have now validated the role of bedside ultrasound as a noninvasive portable tool to assess gastric content and volume to clinically evaluate aspiration risk by providing qualitative and quantitative information.

The main objective of point-of-care (POC) gastric ultrasound is to help clinicians assess gastric contents when NPO status is unknown or uncertain in the immediate pre-anesthetic period. Other than anesthesiologists, POC gastric ultrasound is also useful to emergency physicians and intensivists who take part in sedation and airway management.

It has a number of important features:

1. it is a bedside, focused diagnostic examination
2. it is a goal-directed assessment i.e., limited in scope and target structures
3. the findings are easily recognizable
4. the scanning technique can be quickly learned and performed
5. the findings help to guide clinical care

## Basic Organization

Date: 4 November 2023

Time: Morning time (9:00 am – 12:00 pm)

Participants: 12 / session (6 per station)

## Course outline

Presentation: Gastric USG: Clinical application for anesthesiologists

### Hands-on practice

Gastric USG: identify gastric antrum, content in stomach, learning qualitative and quantitative methods for estimating gastric fluid volume in adult non-pregnant patients

Discussion on clinical application of Gastric USG and possibility of its future impact on NPO guidelines

Presentation of certificates of completion to delegates

Closing remarks and feedback collection from delegates

## Conclusion

This 1-day workshop on Gastric USG will focus on understanding the sonoanatomy of gastric antrum, acquiring reasonable skills to locate and identify gastric antrum during practice sessions, ability to differentiate between empty stomach and full stomach status, and learning about the qualitative and quantitative methods of estimating the volume of stomach content.

By the end of the workshop, participants will be able to perform POCUS Gastric USG with confidence, improving their perioperative decision making for safer conduct of anesthesia.

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### Introduction

Upper airway ultrasound is a valuable, non-invasive, simple, and portable point of care ultrasound (POCUS) for evaluation of airway management. Ultrasound enables us to identify important sonoanatomy of the upper airway such as thyroid cartilage, epiglottis, cricoid cartilage, cricothyroid membrane, tracheal cartilages, and esophagus. Understanding this applied sonoanatomy facilitates clinician to use ultrasound in assessment of airway anatomy for difficult intubation, endotracheal tube placement, assessment of airway size, ultrasound-guided invasive procedures such as percutaneous needle cricothyroidotomy and tracheostomy, prediction of postextubation stridor and detecting upper airway pathologies.

Widespread POCUS awareness, better technological advancements, portability, and availability of ultrasound in most critical areas may facilitate upper airway ultrasound to become the potential first-line non-invasive airway assessment tool in the future.

It has a number of important features:

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### Basic Organization

Date: 5 November 2023

Time: Morning time (9:00 am – 12:00 pm)

Participants: 12 / session (6 per station)

## **Course outline**

### **Day 3, 5 November 2023**

Short Presentation: Airway USG: Clinical application for anesthesiologists

#### Hands-on practice

Airway USG: identify important structures such as tongue, hyoid bone, epiglottis, thyroid cartilage, cricoid cartilage, vocal cords, trachea and esophagus. Identifying landmarks for cricothyroidotomy (cricothyroid membrane), percutaneous tracheostomy (tracheal rings) and superior laryngeal nerve blocks.

Discussion on clinical application of Airway USG

Presentation of certificates of completion to delegates

Closing remarks and feedback collection from delegates

## **Conclusion**

This 1-day workshop on Airway USG will focus on understanding and acquiring the skills in appreciating sonoanatomy of airway, and discussion on clinical application of POCUS in airway management in the perioperative settings.

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