Lecture summaries

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Abdominal POCUS Made Simple: High-Value Scans You Can Use Tomorrow
This lecture introduces abdominal POCUS as a rapid, clinically driven adjunct to history and physical examination in emergency and critical care patients. Learners gain the ability to identify appropriate trauma and non-trauma indications, particularly in unstable or collapsed patients. The session emphasizes correct equipment and probe selection, optimized machine settings, and a systematic five-site scanning approach. Participants also learn to recognize common POCUS findings and integrate them into real-time clinical decision-making and patient monitoring

By the end of this lecture, participants should be able to:

1. Describe the role of abdominal point-of-care ultrasound (POCUS) as a clinically driven adjunct to history and physical examination in emergency and critical care patients.
2. Identify appropriate indications for abdominal POCUS in both trauma and non-trauma presentations, including cardiorespiratory instability and acute collapse.
3. Select appropriate ultrasound equipment, probes, and machine settings to optimize abdominal POCUS image acquisition in the ER and ICU.
4. Perform a systematic abdominal POCUS examination, including correct patient positioning, probe handling, and identification of the five standard scanning sites.
5. Recognize common abdominal POCUS findings, such as free fluid, gall bladder wall edema, urinary bladder distension, and gastrointestinal motility abnormalities, and integrate these findings into rapid clinical decision-making and patient monitoring.

Heart in Hand: Practical Cardiovascular POCUS to Guide Acute Clinical Decisions
This lecture defines cardiac POCUS as a focused bedside assessment used to rapidly answer clinical questions in emergency and critical care settings. Learners identify key indications for use in dyspnoeic or hemodynamically unstable dogs and cats. The session covers appropriate probe selection, machine setup, and acquisition of essential cardiac views. Emphasis is placed on using findings to guide urgent decision-making and procedures while understanding the limitations of cardiac POCUS compared with full echocardiography.

By the end of this lecture, participants should be able to:

1. Define cardiac point-of-care ultrasound (POCUS) and describe its role as an adjunct to physical examination in emergency and critical care patients.
2. Identify appropriate clinical indications for cardiac POCUS in dogs and cats, particularly in dyspnoeic or hemodynamically unstable patients.
3. Describe suitable ultrasound equipment, probe selection, and machine settings for performing cardiac POCUS efficiently in the ER and ICU.
4. Perform and recognize key cardiac POCUS views and understand their diagnostic relevance.

5. Use cardiac POCUS findings to support rapid clinical decision-making, guide emergency procedures, and monitor hospitalized patients, while recognizing its limitations.

Advances in POCUS training - phantoms, cadavers and augmented reality

This session explores modern training modalities for POCUS, including phantoms, cadavers, and virtual augmented reality (VAR). Learners compare the strengths and limitations of each approach in terms of realism, accessibility, cost, and educational value. The lecture highlights how different modalities suit different stages of learning and skill development. Participants learn how combining advanced tools with traditional teaching can improve procedural accuracy, spatial understanding, and learner confidence.

By the end of this session, learners will be able to:

1. Describe the role of phantoms, cadavers, and virtual augmented reality (VAR) in POCUS training.
2. Compare the advantages and limitations of phantoms, cadaver-based training, and VAR for acquiring POCUS skills.
3. Identify appropriate educational contexts in which each training modality is most effective.
4. Apply knowledge of advanced POCUS training tools to improve skill acquisition, procedural accuracy, and learner confidence.