

Chapter 1 : VIDEO: Point of Care Ultrasound (POCUS) in Cardiology and Critical Care | DAIC

Critical Care Ultrasonography. This program offers comprehensive, hands-on experience. Take individual courses, or earn the Certificate of Completion (COC) for critical care ultrasound.

Contact Us Echocardiography Stanford Critical Care Medicine has a long and extensive history in training fellows and residents in bedside echocardiography and ultrasound for critically ill patients. Anne-Sophie Beraud enhanced the training through implementation of bedside training, simulation training, focused individual feedback for acquired images, and online resources.. Sara Nikravan developed a self-directed online training course for Anesthesia, Internal Medicine, and Emergency Medicine trainees. This course is now available online through Stanford Lagunitas. The course will lead you through the core concepts of ultrasound physics, transthoracic echocardiography, lung ultrasound, and measurement techniques. She is joined by a group of core faculty dedicated to state-of-the art ultrasound training for our fellows. These faculty include Dr. Marianne Chen and Dr. Training in transthoracic echocardiography for critically ill patients takes place over the entirety of the fellowship program in order to provide a longitudinal learning experience. All fellows spend one week of intensive training in TTE during the first two months of fellowship. The week incorporates simulation training, one-on-one bedside scanning with attending physicians, in addition to one-on-one bedside training with the echocardiography ultrasonographer technicians. Each fellow is expected to review all images during this one-week training. The week concludes with a one-on-one review session with Dr. Rao to review all images obtained. This bootcamp week prepares fellows to use critical care ultrasound to assist in the bedside assessment of critically ill patients in order to quickly assess volume status e. Many fellows choose to complete an elective in Advanced Echocardiography and Critical Care Ultrasound. This elective incorporates advanced transthoracic echocardiography techniques, training in transesophageal echocardiography, and involvement and participation in the many ultrasound and echocardiography research studies conducted at Stanford and our affiliate sites. During this elective the fellow is encouraged to attend reading review sessions hosted by the Cardiac Anesthesia Division and the monthly ECHO rounds didactic. Fellow are encouraged to record all studies and document all studies throughout fellowship training in MedHub. All fellows trained to reach competency at the advanced level by the end of their training.

Chapter 2 : ICU Sonography – Demystifying ultrasound in intensive care

Vijay is a long-time ultrasound enthusiast. He is a firm believer of ultrasound as an extension of clinical examination and a decision enhancing tool, especially in emergency medicine where the magic of sound waves is invaluable in making time-critical life-saving decisions.

This article has been cited by other articles in PMC. Abstract There is increasing interest in the use of ultrasound to assess and guide the management of critically ill patients. The ability to carry out quick examinations by the bedside to answer specific clinical queries as well as repeatability are clear advantages in an acute care setting. In addition, delays associated with transfer of patients out of the Intensive Care Unit ICU and exposure to ionizing radiation may also be avoided. Ultrasonographic imaging looks set to evolve and complement clinical examination of acutely ill patients, offering quick answers by the bedside. In this two-part narrative review, we describe the applications of ultrasonography with a special focus on the management of the critically ill. Part I explores the utility of echocardiography in the ICU, with emphasis on its usefulness in the management of hemodynamically unstable patients. We also discuss lung ultrasonography - a vastly underutilized technology for several years, until intensivists began to realize its usefulness, and obvious advantages over chest radiography. Ultrasonography is rapidly emerging as an important tool in the hands of intensive care physicians. Critical care, imaging, ultrasonography Introduction Point of care ultrasonography is emerging as an important bedside tool to enable expeditious decision making in critically ill patients. Ultrasonography has spread beyond the realms of conventional radiology to assist intensive care physicians answer specific clinical questions in day-to-day practice. Although computerized tomography remains the gold standard imaging tool for many disease processes, the hazards of transferring a sick patient out of the Intensive Care Unit ICU and the delays involved have prompted ICU physicians to seek innovative ways to use ultrasound, such as in lung imaging. Besides, ultrasound guidance has enhanced the safety of invasive interventions in the ICU, including insertion of vascular catheters and drainage of collections. This two-part review focuses on the use of ultrasonography with emphasis on seeking crucial information by the bedside to optimize care in critically ill patients. In Part I, we describe the applications and utility of echocardiography and chest ultrasonography in the ICU setting. Echocardiography in the intensive care unit It is being increasingly realized that point of care echocardiography carried out by intensive care physicians could be a valuable tool that helps with the diagnosis and hemodynamic management of critically ill patients. A more detailed study, if required, may be performed by specialists in the echocardiography laboratory later on. Transesophageal studies may be required if transthoracic windows are poor, or for detailed evaluation of vegetations, thrombi, and prosthetic valves. This review focuses on transthoracic examination. Basic echocardiographic views Basic echocardiographic views are depicted in Figure 1. The apical views are obtained by placing the probe at the site of the apex beat with the probe marker directed towards the left axilla. A four chamber view including the atria, ventricles, the interventricular and the interatrial septa are seen by moving the probe along the intercostal space. The apical five chamber view includes the left ventricular out flow tract LVOT and the aortic valve. This view is obtained by gradually tilting the probe upwards from the apical four chamber position. The parasternal views are obtained by positioning the probe on the second or third intercostal space close to the left sternal border. The parasternal long axis PLAX view is obtained with the probe marker pointing towards the right shoulder. Tilting the patient to the left lateral position improves the view. In mechanically ventilated patients, the expanding lung may obscure views. If appropriate, reducing the inspiratory pressures and positive end expiratory pressure PEEP level for a brief period might improve visualization. If conventional views are unobtainable, the subcostal view may be an option. To acquire this view, the probe is placed to the right of the xiphoid notch with the probe marker pointing to the left hip. Pushing down with gentle pressure would enable the ultrasound beam to travel under the sternum and the rib cage to view the heart. In some patients, this may be the only accessible echo window.

Chapter 3 : critcaresono “ We are dedicated and passionate about point-of-care ultrasound education.

Critical Care Ultrasonography is a complete, hands-on guide to successful image acquisition and interpretation at the bedside. It delivers an all-inclusive, yet concise review of the optimal use and interpretation of ultrasonographic images in everyday practice.

Program Requirements Must be completed within 3 years of starting the program; listed in recommended order of completion. Portfolio images must be generated and collected personally after attending one of the two live courses. Complete Online Learning Module: Designed by frontline intensivist experts in critical care ultrasonography, these interactive, multimedia e-learning tutorials review essential components of critical care ultrasound. CME for Modules expired December 31, Essentials in Critical Care Review key elements of critical care ultrasonography, and practice image acquisition on human models. Ultrasound images demonstrating normal and pathologic findings offer a comprehensive learning opportunity. View all available course dates. Attend Critical Care Ultrasonography: Complete Online Portfolio After completion of the live courses and online CAE modules, you are eligible to enroll in the portfolio and final assessment. Access to the portfolio will only be granted after completing the online and live course components. A key element to training in critical care ultrasonography is ongoing bedside scanning activity. Expect a productive educational experience with peer-to-peer training that will foster ongoing scanning activity and yield high-quality image acquisition. You will need to have access to an ICU-based ultrasound machine with image storage capability. Images should be recorded and exported directly from an ultrasound machine for upload to the portfolio. The emphasis for portfolio development will be on quality of imaging. You may submit normal study results as the emphasis is on image quality rather than disease process. As a critical care ultrasonographer, consider developing your own teaching file, and this portfolio can start this process. See below for specific Requirements for Portfolio Image Collection. Pass a Final Comprehensive Final Assessment All previous requirements must be met before taking the exam. Opportunities to complete the final assessment are offered during the CHEST Annual Meeting and also when the essentials course in critical care ultrasound is offered during the year. CME is not offered for the portfolio or the final assessment. Participants are required to complete the COC program within 3 years. Target Audience Bedside intensivists interested in acquiring competence in critical care ultrasonography. Fellowship program directors who need to develop faculty capability in ultrasonography in order to train their fellows.

Chapter 4 : Bedside ultrasonography: Applications in critical care: Part I

Critical Care. Bedside ultrasound has become a valuable tool for physicians working in critical care environments to obtain immediate clinical information, improve patient safety, increase efficiency, and decrease complications.

Passionate about teaching, she started the successful ultrasound teaching program at Royal Prince Alfred Hospital by developing courses and workshops targeting Emergency doctors. Her on line Emergency course has also been adopted by the University of Sydney for their critical care ultrasound program. He is a firm believer of ultrasound as an extension of clinical examination and a decision enhancing tool, especially in emergency medicine where the magic of sound waves is invaluable in making time-critical life-saving decisions. Clinical lead in ED ultrasound and term supervisor for US special skills term at Nepean Hospital and Sydney Adventist Hospitals, actively involved in regular ultrasound medicine teaching and research related to ultrasound in emergency medicine. His interest and enthusiasm for ultrasound is central to his practice and his desire to teach others infective. She uses ultrasound as an extension of her clinical skills, integrating this tool to improve her clinical acumen. She has contributed several of her cases to this website. The pain was constant, in fact, it was getting worse. It was not associated with vomiting. He was so breathless that it was an effort to walk 3 to 4 metres. He had recently returned from Read more about TB cardiomyopathy

â€” All done and dusted? Sam was 4 months old when he was brought by his parents to the ED. He presented with acute onset of crying and distress which awoke him from sleep. He was grunting and drawing his knees up to his chest. There is laminar thrombus on the apico-septal wall. The bright echogenic structure seen in systole. The septum is akinetic. A point of care ECHO is performed. An incidental finding of a bicuspid aortic valve is found. Parasternal long axis of left ventricle PLAX showing that the aortic valve closure is eccentric. Measurement of internal diameter of LV at end diastole. Very large pericardial effusion. To be accurate this should be done using the ECG for timing. Practically speaking the exact size of the effusion is not important. This effusion is circumferential and is over 2cm in Read more about Large pericardial effusion[â€].

Chapter 5 : Critical Care Ultrasound Machines | Philips Healthcare

Build upon your ultrasonography proficiency and earn a Certificate of Completion in critical care ultrasound. This assessment-based certificate fulfills the quality standards set by the Institute of Credentialing Excellence and is made up of live courses, the completion of an online portfolio, and a final assessment.

Chapter 6 : SCCM | Critical Care Ultrasound

Focused ultrasound examinations in the critical care setting have become an extension of the clinical assessment because of their rapid, precise detection capabilities. Assist in the immediate management of patients by learning or enhancing point-of-care ultrasound skills.

Chapter 7 : Critical Care Ultrasonography - Alexander Levitov, Paul H. Mayo, Anthony D. Slonim - Google

POCUS, point-of-care, ultrasound, thoracic ultrasonography, echocardiography, ICU, vascular ultrasonography, abdomen, ultrasonography For the already converted, a reminder of how POCUS has changed ICU practice; for the ultrasound naÃve, an aperitif to leave the reader with interest in this evolving paradigm shift of patient care.

Chapter 8 : SCCM | Live Critical Care Ultrasound: Adult

The Critical Care Ultrasound courses provide opportunities for sponsors to bring their marketing message and information about their products and services directly to key members of the intensive care/critical care unit team.

Chapter 9 : Point-of care ultrasonography in critical care - calendrierdelascience.com

Point-of-care ultrasonography (POCUS) is a useful imaging technique for the emergency medicine (EM) physician. Because of its growing use in EM, this article will summarize the historical development, the scope of practice, and some evidence supporting the current applications of POCUS in the adult.