

Ultrasound in Acute Medicine

Ultrasound Research UK

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The author trained initially in acute medicine and then Radiology allowing a hybrid approach to POCUS.

Ultrasound can be useful in acute medical patient to diagnose, accelerate or escalate patients to appropriate teams.

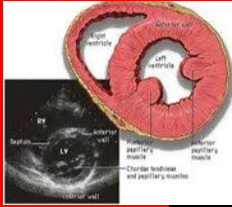


Chest pain

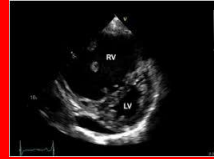
With one image taken of the heart in the short axis parasternal view 3 questions can be answered. Is there a pericardial effusion? What is the left ventricular function? Is there right heart ventricular dilatation suggestive of a pulmonary embolus?

These questions are of utmost importance in patients with chest pain and breathlessness, a common medical presentation.

This imaging and diagnosis is of most use in A/E resuscitation and intensive care units.



A 50 year old male presents to A/E with a past history of MI and breathlessness, the Left heart is dilated consistent with left heart failure



A 30 week pregnant patient presents to A/E with chest pain and breathlessness, the ultrasound demonstrates a dilated right heart consistent with a possible pulmonary embolus



A 20 year old patient presents with breathlessness after a viral infection, the ultrasound demonstrates a pericardial effusion.

Breathlessness

In patients who are breathless, ultrasound can aid clinical exam differentiating between consolidation and pleural effusion and normal lung especially with equivocal chest x-ray



Normal lung echogenic veil



Consolidation in the right lower lobe



Right large pleural effusion echo poor area no image

Acute kidney injury

Ultrasound can differentiate between medical and surgical causes of renal failurehydronephrosis or not



Normal renal anatomy



Hydronephrotic kidney



Dilated common duct obstructive jaundice



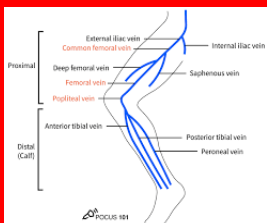
Ascites irregular liver surface of cirrhosis

Jaundice patient

In the jaundice patient with no stigmata of liver disease ultrasound can differentiate between medical and surgical causes of jaundice. Dilated duct or non dilated ducts

Unilateral swollen leg

DVT Ultrasound instant confirmation or exclusion of deep vein thrombosis avoiding unnecessary anti coagulation

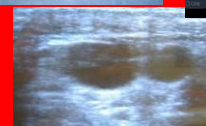


Compressive common femoral vein, no thrombus



Non compressive common femoral vein containing thrombus

Guide for vascular access and drainage



Critical Care Ultrasound in 4 images

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- Image 1 renal failure



- Image 2Lung base /fluid



- Image 3.....DVT



- Image 4Parasternal short axis view

