Role of Ultrasound In Shock

The use of point of care ultrasound (POCUS) is becoming widely established as a standard of care within Emergency and Intensive Care Departments. It is a safe, non-invasive tool used as an extension of our clinical examinations, which can help answer focused questions and rule out life-threatening diagnoses quickly. Ultrasound can help determine both the severity and the causes of shock, within minutes and thus expedite definitive treatment. Recently there has been a trend to incorporate the use of ultrasound early in the care of a critically ill patient. Many protocols for the diagnosis and evaluation of shock have been described which usually share the same fundamental elements and differ only by means of the sequence in which the scanning needs to be performed.

What is LOW-BP?

A novel systematic approach termed “LOW-BP” follows a sequence based on the anatomical location of organs scanned. This way the operator will start at the lungs and move all the way down to the lower limb scanning. The components of this mnemonic include: L for lungs to look for pneumothorax and pulmonary edema; O for organs to cover cardiogenic shock, pulmonary embolism and pericardial tamponade; W stands for water and denotes the fluid status which is assessed through the inferior vena cava scan; B is for body cavities covering peritoneal and pleural spaces; P is for pipes and pregnancy to look for deep vein thrombosis, and ectopic pregnancy.

Conclusion:

LOW-BP offers a comprehensive scanning sequence which is easy to recall in a critical care environment which can often be stressful and chaotic. It is because of its systematic up to down approach, which is often not the case when using other protocols. A study in near future will be conducted to verify the use of the LOW-BP protocol, to see if learners are able to conduct the examination with ease and in a timely manner, suited for critical care and emergency environments.

References: