Assessment of Severe Dyspnea in Critical ill Patients by Transthoracic Sonography: Fayoum Experience with BLUE protocol.

Summary:

Background: Management of critically ill patients requires imaging tools, which are important for optimizing diagnostic and therapeutic actions. Both bedside chest radiography (CXR) and thoracic computed tomography (CT) have limitations which constrain their utility.

The aim of our work is to explore the value of transthoracic ultrasound (TUS) using BLUE protocol in critical ill patients with severe dyspnea. **Method:** This study included one hundred and nine ICU patients with acute dyspnea at Fayoum university hospital. The judgments of chest ultrasound using BLUE protocol were compared to final diagnoses; rare diagnoses and uncertain diagnoses were excluded. **Results:** By application of BLUE protocol, TUS was absolutely sensitive, specific and accurate for diagnosis of pneumothorax. For pneumonia, the sensitivity, specificity, and diagnostic accuracy were 93.8**%** , 95.7**%** and 95.8**%** respectively, while these parameters for pulmonary edema were 100 **%** , 96.8**%** and 99**%** respectively. TUS was absolutely sensitive in diagnosis of COPD , asthma or diffuse parenchymal lung disease(DPLD) , while, the specificity and diagnostic accuracy were 88.9 **%** and 88.9**%** respectively for COPD and asthma and 96.8% and100% respectively for DPLD.

Conclusion: lung ultrasound is very vital bedside diagnostic tool in critical care units with rapid and high diagnostic yield among severely dyspneic patients.

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