Point of care ultrasound in COVID-19 pandemic

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Dear Editor,

Point of care ultrasound (POCUS) is useful to evaluate early lung changes in the emergency room in suspected COVID-19 patients. POCUS findings seems to be non-specific, microbiological confirmation is needed. Its unique feasibility where CT chest is not available or in restricted use for infection control, makes it a non-invasive and cost effective intervention. It can be used with a hope of reducing contamination of imaging room.

Using a 12-zone method, features are thickening of the pleural line with pleural line irregularity; B lines in a variety of patterns including focal, multifocal, and confluent; consolidations in a variety of patterns including multifocal small, non-translobar, and translobar with occasional mobile air bronchograms; appearance of A lines during recovery phase and pleural effusions are uncommon. [1-3]

Nature of B lines if three or more per acoustic window, qualified for interstitial or alveolar-interstitial pattern. If homogenous interstitial pattern favors cardiogenic edema, heterogenous pattern with subpleural consolidation and pleural thickening is in favor of pneumonia or acute respiratory distress syndrome.

Literature of lung POCUS is showing promise. Huang [1] showed that COVID-19 patients had infiltrations in bilateral lower lobes of lung. This study showed

characteristic features such as bilateral B lines and subpleural consolidations consistent with CT chest. B lines are more fused and fixed as compared to pulmonary edema. Peng et al showed similar features in a multilobar pattern. [2] Poggiali et al [3] showed B lines and ground glass opacities.

Limitation of POCUS is that it is unable to detect deep lesions in the lungs. We believe that POCUS being ergonomically favorable with fewer infection control implications, there is a utility for rapid assessment of the patients in the emergency room, to review response during proning for better oxygenation and guide lung recruitment. It is also useful in evaluating undifferentiated shock, fluid tolerance, inserting and confirming central lines or intubations amidst global respiratory pandemic.

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