Pleural Ultrasound

I. Patient Preparation

a. None

II. Equipment

a. Performed with real-time scanner using a sector or curved linear transducer with frequencies ranging from 8 MHz to 12 MHz, higher frequencies often necessary for children and infants. On occasion, large patients may require a lower frequency of 5 MHz.

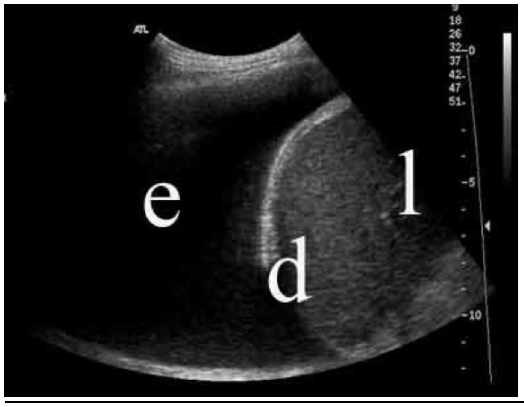
III. Procedure Protocol

a. Assess for the presence of a pleural fluid collection, which can be dependent or loculated. Assess the entire thorax from the apex to the base.

b. Different patient positions (e.g., supine, oblique, prone, decubitus, standing, sitting) should be documented if needed.

c. Pleura

1. Image the pleura in Sagittal and Transverse planes.
2. Measure the depth of the pleural fluid collection.
3. Ultrasound feature may differentiate between a transudative and an exudative effusion, which can help narrow down the differentials for the cause of effusion.
4. Transudate pleural effusion is always anechoic in nature
5. An exudative pleural effusion may show the following features: 1. May be anechoic or echogenic, 2. May show septations within 3. May show debris or other particulate matter within 4. May show loculations 5. May have associated pleural thickening [pleura >3mm] 6. May have associated pleural nodules 7. May have associated lung parenchymal lesions.
6.  Septations

7. 

Simple effusion