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**MORDEN EXAMINATION TECHNIQUE IN PULMONOLOGY.** **THORACENTESIS**

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Thoracentesis (THOR-ah-sen-TE-sis) is a procedure to remove excess fluid in the space between the lungs and the chest wall. This space is called the pleural space. Normally, the pleural space is filled with a small amount of fluid—about 4 teaspoons full.

Regarding use of lung ultrasound for performing thoracentesis and/or insertion of chest drainage tubes, with the aid of ultrasound one can identify the best site for the procedure, taking into account the need for sufficient depth of pleural fluid (at least 10 mm is considered safe) and the absence of lung parenchyma interposed (the assessment should be carried out, if possible, with maximal inspiratory maneuvers). One can thus proceed with the so-called “X marks the spot” technique, identifying by ultrasound the best site for the thoracentesis/drainage tube insertion and then executing the procedure guided by the preceding ultrasound evaluation, or else one can perform the procedure under constant sonographic visualization, taking advantage of all its benefits/advantages .

The use of lung ultrasound as a guide for procedural interventions is particularly useful in critical care conditions, given the combination of a relatively immobile patient and the feasibility of “bedside” performance of the procedure. The possibility of identifying and guiding with security the aspiration of pleural effusions in patients on mechanical ventilation is well known . The possibility of instant recourse to ultrasound-guided procedures has been associated to a significantly lower risk of pneumothorax . Chest ultrasonography can be a useful diagnostic tool for respiratory physicians to assess and monitor respiratory pathologies in many different conditions with wide field of application.

Conclusions. Сhest ultrasonography can help physicians to get differential diagnosis in sonographic interstitial syndromes and acute cardiogenic/non-cardiogenic pulmonary edema, trying to give advanced hypotheses about the genesis of vertical artifacts.

Moreover, it is shown its utility to raise diagnostic suspicion of pulmonary embolism, to characterize lung consolidations and to guide interventional procedures in pulmonology.

Finally chest ultrasonography may be a useful diagnostic tool in pediatric and neonatal care and could be used in many different pathological conditions avoiding ionizing radiations.