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Utilization of Ultrasound in Diagnosis Bilateral Pleural Effusion

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Abstract: Pleural effusion is excess fluid that accumulates in the pleural cavity, the fluid-filled space that surrounds the lungs. Excessive amounts of such fluid can impair breathing by mass effect, limiting the expansion of the lungs during ventilation. A 36 -year-old presented with cough, shortness of breathing (SOB) and fever. A ultrasound had shown bilateral pleural effusion.
Keywords: Pleural effusion, Ultrasound

INTRODUCTION

A pleural effusion is an abnormal collection of fluid in the pleural space. It results from excess fluid production or decreased absorption or both. It is the most common manifestation of pleural disease. The etiologies range from cardiopulmonary disorders to symptomatic inflammatory or malignant diseases. Urgent evaluation and treatment of pleural effusion is necessary [1].

Imaging

An area of whiteness on a standard posteroanterior X-ray is observed in pleural effusion [2]. The space between the visceral pleura and the parietal pleura is not normally observed. Pleural effusion has similar density to body fluid, so in radiographs it is not observed. Since the effusion has greater density than the rest of the lung, it gravitates towards the lower portions of the pleural cavity [3].

CASE REPORT

We report a case of a 36 -year-old of Sudan origin reported in the department of ultrasound, presented with cough, SOB and fever. A careful ultrasound assessment images showed bilateral pleural effusion (Fig. 1).

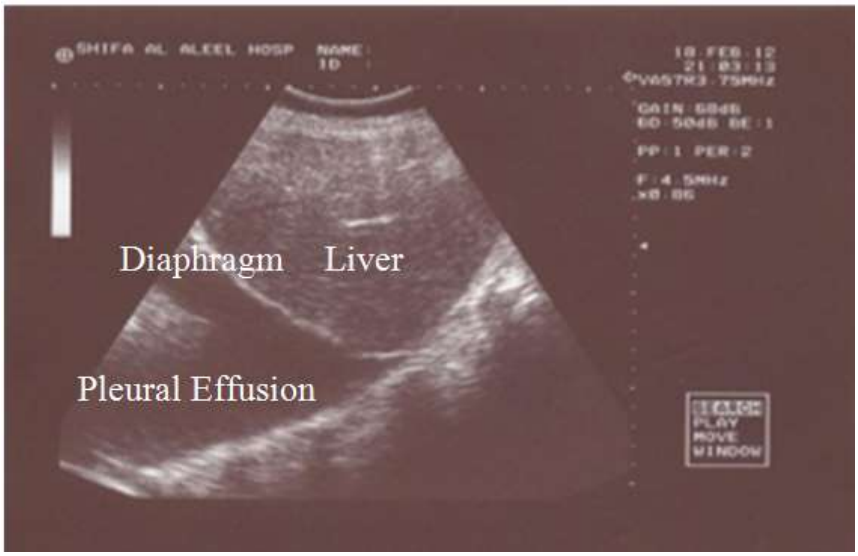

Fig. 1: TAS showing Diaphragm, liver and Pleural Effusion

DISCUSSION

The cause of the pleural effusion is undetermined after repeated cytology and pleural biopsy in around 15% of cases [4]. It is sensible to reconsider diagnoses with a specific treatment—for example, tuberculosis, pulmonary embolism, fungal infection [5]. A tuberculin skin test is positive in about 70% of patients with tuberculous pleurisy and the combination of a positive tuberculin skin test and an exudative pleural effusion containing predominantly lymphocytes is sufficient to justify empirical antituberculous therapy [6]. There are no specific pleural fluid tests for pulmonary embolism so, if there is a clinical suspicion of the diagnosis, imaging for embolism should be undertaken. Many undiagnosed pleural effusions are eventually proved to be due to malignancy. If this possibility is to be pursued after routine tests have failed, thoracoscopy is advised [6].

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