Fayoum experience in the ultrasonographic evaluation of diffuse parenchymal lung disease

Summary:

Abstract:

Chest ultrasound has many uses, both diagnostic and interventional. It may be used for a diagnosis of multiple pleural diseases (pleural effusion, pleural masses, and pneumothorax). It is also used in the diagnosis of diseases caused by lung parenchymal lesions, such as neoplasms, pulmonary embolism, pneumonia and lung abscesses**.**

Aim:

This study aimed to evaluate the sonographic features of diffuse parenchymal lung disease (DPLD).

Design: A prospective study.

Setting: Fayoum university hospital in Egypt during January 2017 to June 2017.

Subjects and methods:

This study included 120 participants. 60 of them were diagnosed as DPLD. For the diagnosis of these cases we need a full medical history, a detailed clinical examination, spirometry, 6 minute walk test (6MWT), arterial blood gases analysis, the high resolution computed tomography (HRCT) and chest ultrasound. The other sixty were studied as control.

Statistical analysis:

The data were collected and coded to facilitate data manipulation and double entered into Microsoft Access and the data analysis was performed by using SPSS software version 18 in windows 7.

The simple descriptive analysis in form of numbers and percentages for qualitative data and arithmetic means as central tendency measurement, standard deviations as measure of dispersion for the quantitative parametric data and the inferential statistic test.

Results:

There was female predominance with a wide range of age. Most of the cases were nonsmokers, breeding birds and exposed to biomass. All cases had diffuse bilateral B-lines. There was a

negative relation between the warrick score from one hand and the B-line number, PaO2, 6MWT and forced vital capacity (FVC) from the other hand.

In contrast a positive relation was demonstrated between the warrick score and B-line distance and pleural thickness.

Most of studied patients (71.6%) had irregular and thickened pleura and (51.6%) have an abolished lung sliding.

Conclusion:

Chest ultrasound has a significant role in diagnosis of DPLD and also in estimating the severity of the disease according to the number and the distance between B- lines.

Multiple B-lines in the combination of thickened and irregular pleural line are highly suggestive of DPLD.