

# Lung Ultrasound Evaluation of Bronchopulmonary Dysplasia in Preterm Infants

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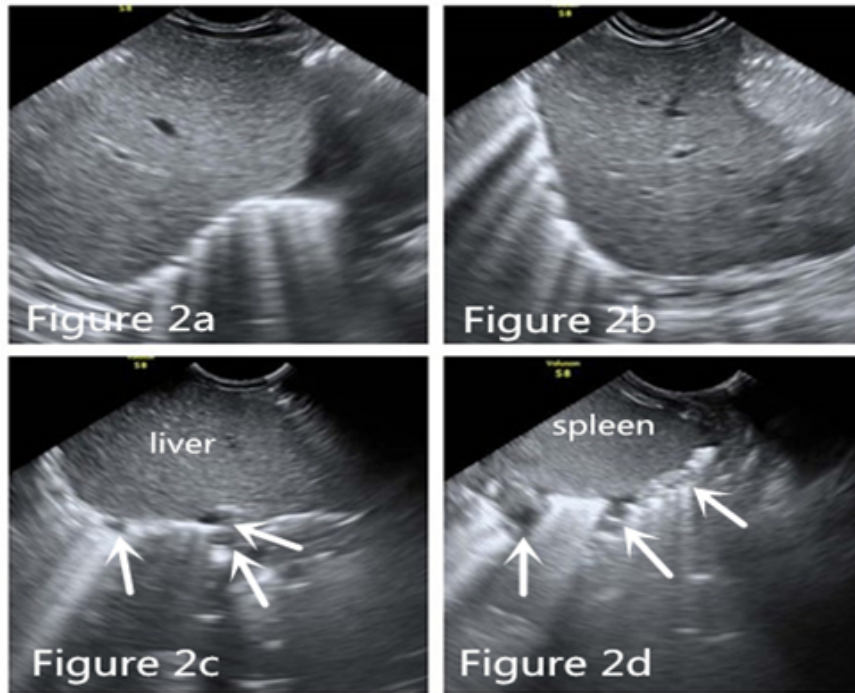
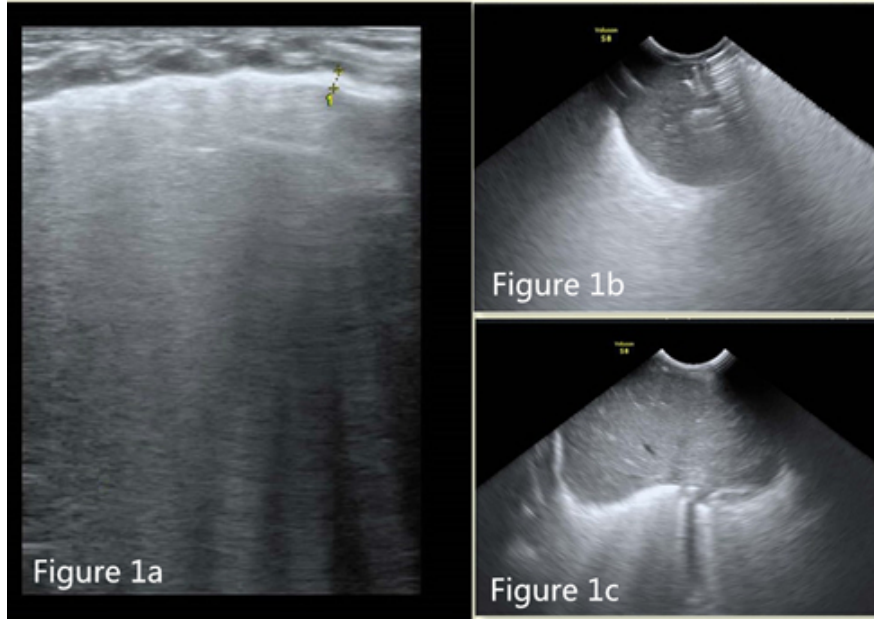
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## Abstract

**Objects:** To analyze the features of ultrasound images of neonates with different degrees of bronchopulmonary dysplasia (BPD), and to investigate the value in evaluating moderate and severe BPD. **Methods:** The neonates admitted to newborn intensive care unit (NICU) were divided into BPD group, non-pulmonary disease group and infectious pneumonia group. This study included two parts: (1)The image characteristics including pleural morphology, alveolar-interstitial syndrome (AIS), retrodiaphragmatic hyperechogenicity and diaphragmatic shape of different degrees of BPD were summarized. (2) We compared the value of lung ultrasound and chest X-ray in diagnosing moderate to severe BPD. **Results:** In the mild BPD group, the proportion of pleural thickening, pleural abnormalities and AIS was higher. The moderate and severe BPD group had higher prevalence of diffuse AIS, small cysts near the diaphragm and rough diaphragm. The sensitivity and specificity of ultrasound in diagnosis of moderate and severe BPD were 31.1% and 99.1%. There was no significant difference of the diagnosis values between lung ultrasound and chest X-ray. **Conclusion:** The ultrasound features of moderate and severe BPD were diffuse AIS, small cysts near the diaphragm and abnormal diaphragm. Compared with chest radiography, lung ultrasound showed the similar value in diagnosing moderate and severe BPD. **Key words:** bronchopulmonary dysplasia, lung, ultrasonography, infant

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