Lung biopsy in infants with SEVERE bronchopulmonary dysplasia

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Abstract

Introduction Lung biopsy is infrequently utilized in the population of infants with severe bronchopulmonary dysplasia (BPD). Yet, its presentation may overlap with other infant diffuse lung diseases, including those within the spectrum of childhood interstitial lung diseases (chILD). Lung biopsy might differentiate between these entities, or discern those with an extremely poor prognosis. Both might alter the clinical management of a subset of infants diagnosed with BPD. **Methods** In this tertiary referral center, we drew on a retrospective cohort of 306 preterm infants with severe BPD. Of these, nine underwent lung biopsy between 2012 and 2017. Our aim was to assess the indication of lung biopsy, the prior clinical history, safety of the procedure, and describe the biopsy findings. Finally, we considered management decisions in relation to the biopsy results in these patients. **Results** The average gestational age and birth weight of the 9 patients were 30±3 (range 27-34) weeks and 1421±571 (range 611-2140) grams. All infants had serial echocardiograms to assess for pulmonary hypertension, genetic testing, and computed tomography angiography (CTA) prior to biopsy. All patients showed moderate to severe alveolar simplification and 8 had some degree of pulmonary interstitial glycogenosis (PIG) ranging from focal to diffuse. Following biopsy, 2 infants with findings of PIG received high dose systemic steroids and 2 separate infants had care redirected. **Conclusion** In our cohort, lung biopsy was safe and well tolerated. Findings from lung biopsy may aid decision making in selected patients when used as a part of a step-wise diagnostic algorithm.

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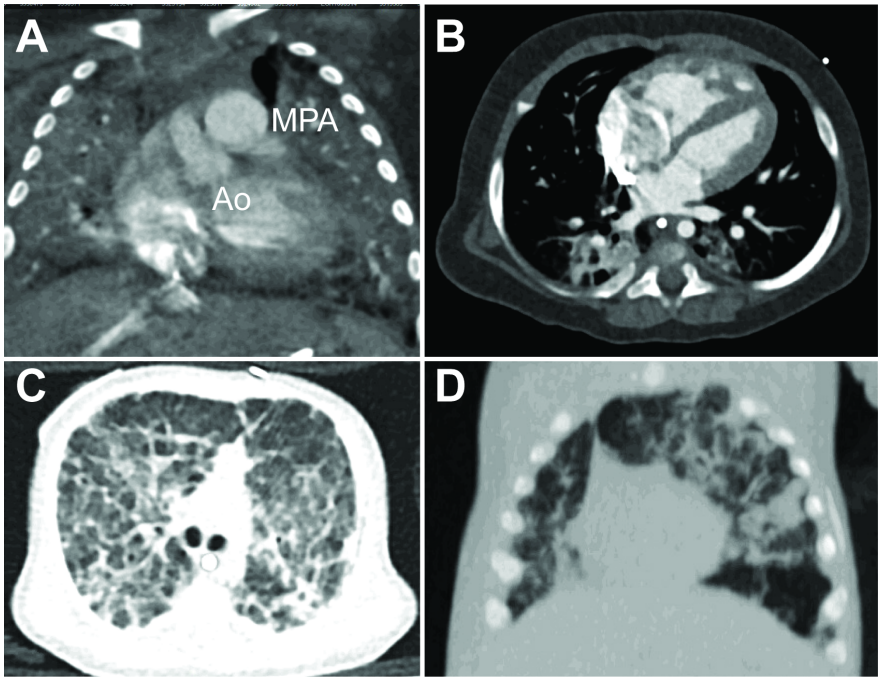

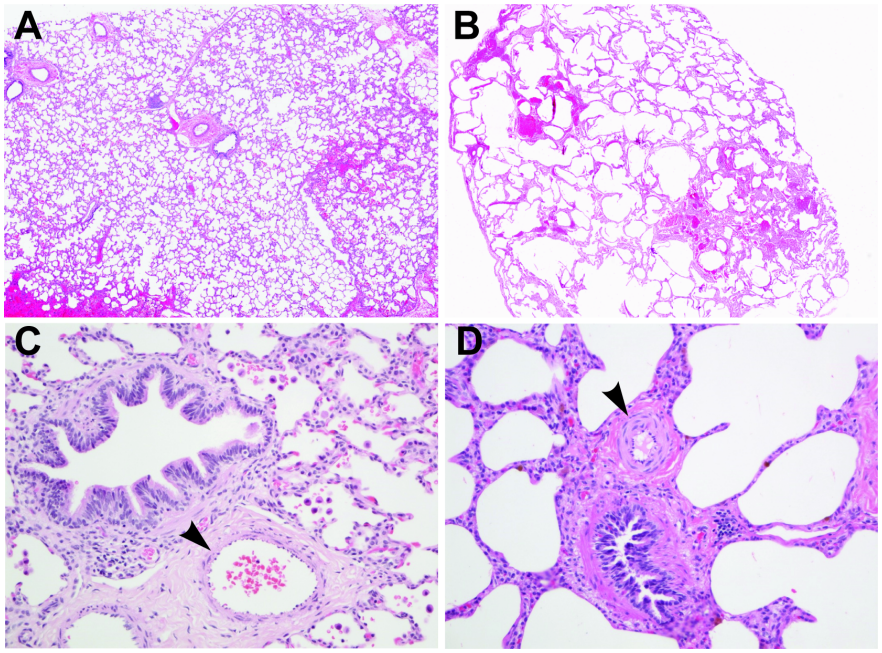

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