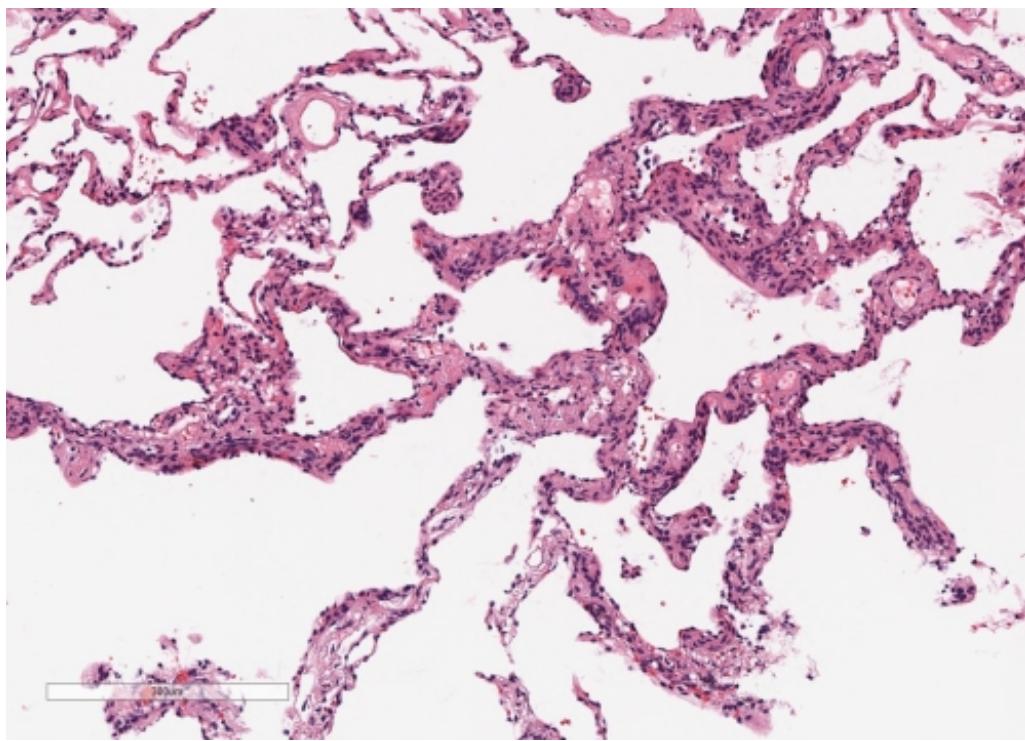


An Alternative Approach of Diagnosing Diffuse Pulmonary Meningotheliomatosis (DPMs) with Transbronchial Cryobiopsy

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Diffuse pulmonary meningotheliomatosis (DPM) is a rare form of diffuse parenchymal lung disease (DPLD) requiring histopathologic evaluation for diagnosis. However, a majority of these patients are asymptomatic and DPM is discovered only as an incidental finding on chest imaging. Subjecting these patients to the current standard of surgical lung biopsy (SLB) exposes them to a high risk procedure for confirmatory diagnosis of a benign disease. Herein we describe the first reported case of DPM diagnosed via transbronchial lung cryobiopsy (TBLCB). A 75-year-old woman with multiple bilateral pulmonary nodules on chest computed tomography (CT) scan and a non-diagnostic CT guided biopsy presented for mild exertional dyspnea and cough. She carried a history of late-onset asthma and giant cell arteritis on chronic low dose prednisone. Her pulmonary function test demonstrated mild obstruction and moderately reduced diffusion capacity. Chest CT angiogram ruled out thromboembolic disease and re-demonstrated numerous bilateral pulmonary micronodules unchanged from prior imaging. She underwent bronchoscopy with lavage, which was negative for infection, and TBLCB of the right middle and lower lobes with a mean biopsy area of 30mm². Histology demonstrated meningothelial-like nodules occurring in close proximity consistent with diffuse minute pulmonary meningothelial-like nodules (MPMNs), known as DPM. The immunohistochemical profile was positive for epithelial membrane antigen and negative for synaptophysin and chromogranin. There was moderate post-operative endobronchial bleeding requiring endobronchial blockade for 24 hours. The patient was admitted to the intensive care unit, but did not require a chest tube, hemodynamic support, or a prolonged hospitalization. There have been several reported cases of MPMNs and DPMs. In a review of 25 DPM cases, the majority of definitive diagnoses were made by SLB, with only a minority (12%) being successfully diagnosed by transbronchial forceps biopsy (fTBBx). Although some studies describe initially attempting fTBBx, most attempts are non-diagnostic necessitating SLB. The historically high post-operative complication rate (19%) and mortality rate (4.2%) in SLB and the limited diagnostic yield (74%) of fTBBx in DPLD make neither technique an ideal option for mild manifestations. TBLCB has an overall diagnostic yield of 89% in DPLD while maintaining a safety profile akin to that of fTBBx. Our case illustrates the use of TBLCB in obtaining diagnosis of DPM and suggests that TBLCB can be adopted as the first-attempt diagnostic modality in a variety of asymptomatic or mildly symptomatic DPLD.



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