A Rare Benign Etiology Mimicking Metastatic Pulmonary Malignancies: A Case Report and Literature Review

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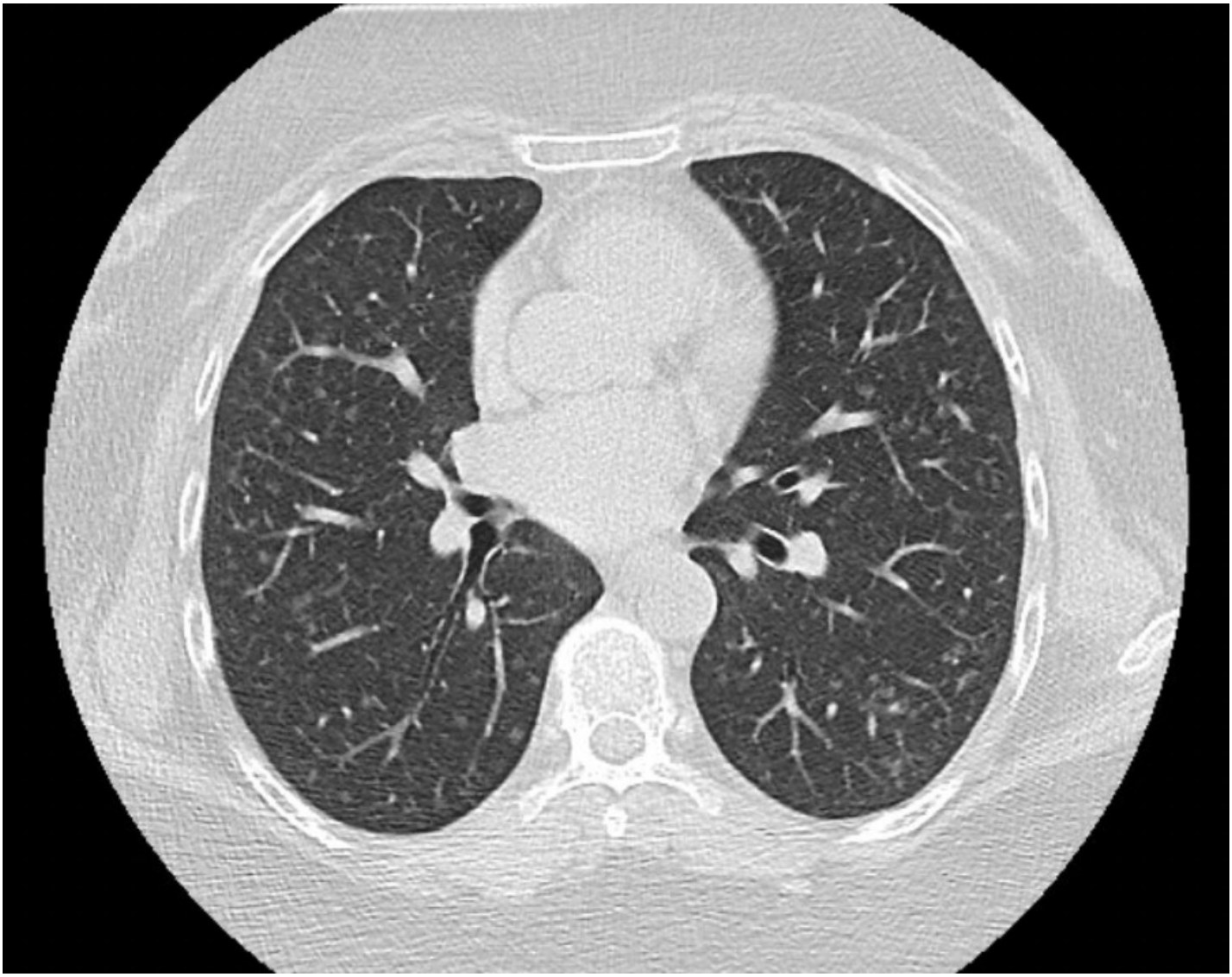
Introduction: Diffuse pulmonary meningotheliomatosis (DPM) is a benign and rare subtype of minute pulmonary meningothelial- like nodules (MPMN), associated with unclear clinical significance. Usually present as multiple bilateral pulmonary nodules mimicking metastatic malignancies. In this study we are presenting a case report discussing the disease history and management of DPM also we reviewed the demographics, presentation, imaging, and diagnostic workup, histopathology findings of 34 patients published in the literature.Methods: We conducted a review of the literature between January 2000 to September 2019 with "minute pulmonary meningothelial-like nodules" or "diffuse pulmonary meningotheliomatosis" as the search terms in multiple scholarly databases.Results: A 55-year-old Caucasian female a lifelong nonsmoker with past medical history of hypertension, GERD, obstructive sleep apnea, presenting with chronic dry cough with dyspnea on exertion. Her pulmonary CT chest showed diffuse minute pulmonary nodules randomly distributed. They did not improve after treatment with oral antibiotics. A video-assisted thoracoscopic biopsy was performed. The specimens showed MPMN by histopathology and immunochemistry, which confirmed final diagnosis of DPM. She was followed up closely by serial imaging and her pulmonary CT showed stabilization of lesions two years later. A total of 35 cases were analyzed, including 34 cases reported in the literature, the patients included were 33 females and 2 males, ages ranged from 51 to 75 years with an average age of 64±8 years at the time of diagnosis. Among them, only 5 (14%) patients had significant smoking history. 22 (62%) patients were asymptomatic and imaging abnormalities were discovered incidentally. Dyspnea and chronic cough are common respiratory complaints (37%). 13 (39%) had active history of malignancy of which breast, uterine and lung adenocarcinoma were common. 8 (22%) patients have mild restrictive defect in their pulmonary function tests. Almost all cases have imaging findings of randomly distributed <5mm ground glass to solid centrilobular nodules with 2% of them were having cavitation. 3 were diagnosed by transbronchial biopsy, 2 by transbronchial cryobiopsy while the remainder had surgical lung biopsy. Stabilization of the lung nodules was identified in all patients that were reported when followed up for 2 years after diagnosis. Conclusion: DPM should be considered in patients with diffuse bilateral pulmonary nodules on HRCT. The condition is more prevalent in females. Almost half of these patients have history of malignancy. CT imaging and surgical lung biopsy are the modalities of choice for diagnosis but transbronchial cryobiopsies have recently been used obtain the diagnosis.



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