Puzzling Pulmonary Patterns: Unraveling the Mystery of Minute Pulmonary Meningothelial-like Nodules (MPMN)

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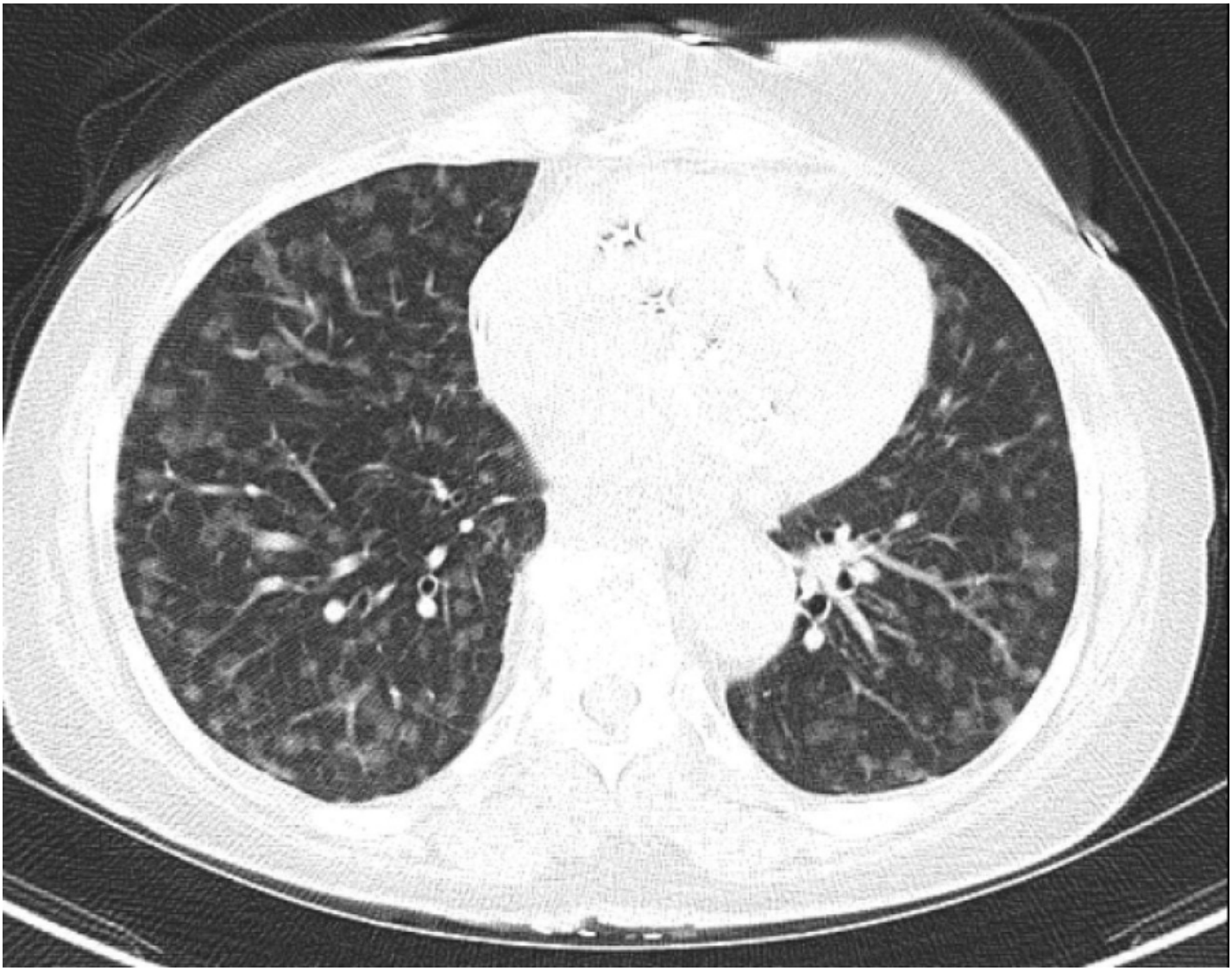
Minute Pulmonary Meningothelial-Like Nodules (MPMN), also referred to as Diffuse Pulmonary Meningotheliomatosis (DPM), is a rare condition with incidence limited to published case reports. Its hallmark radiographic features consist of diffuse, small, ground-glass nodules. A histological diagnosis is essential in order to exclude other conditions with similar radiographical presentation such as infectious, inflammatory, or malignant processes. We present a case of MPMN diagnosed via transbronchial cryobiopsy (TBCB). The patient is an 83-year-old female who underwent a coronary calcium CT which incidentally discovered diffuse ground-glass nodules. She endorsed chronic baseline dyspnea but otherwise lacking symptoms to suggest infection or other active extrapulmonary conditions. She is a non-smoker without a history of malignancy. Due to the broad differential diagnoses, the patient underwent a bronchoscopy with bronchoalveolar lavage (BAL) that revealed normal cell differentials and negative cultures for bacteria, mycobacteria, and fungi. TBCB was performed using a 1.7 mm cryoprobe and two samples were obtained from the right lower lobe. A total freeze time of six seconds was followed by rapid withdrawal of the cryoprobe and the flexible bronchoscope en-bloc. Immunohistochemical testing was positive for epithelial membrane antigen (EMA) and negative for chromogranin and synaptophysin consistent with MPMN. Histopathology was also consistent with the diagnosis. After discussion, the patient opted for conservative management and she was clinically and radiographically stable during her three-month follow-up. MPMN was first described in 1960 by Korn et al who postulated the lesions as chemodectomas. In 1988 the nodules wereidentified by Gaffey et al as meningothelial after immunohistochemical testing revealed the EMA positivity. The pathophysiology and clinical implications of MPMN remain somewhat elusive but, the condition is generally deemedbenign. Associations have been drawn with other conditions such as pulmonary embolism, primary lung cancer, and chronic lung or cardiac conditions. Given its presentation, tissue acquisition is imperative for a definitive diagnosis especially when considering other potential nodular diseases. Published case reports describe MPMN diagnosis in patientsvia surgical lung biopsy. To our knowledge, there is only one publication of a patient diagnosed with MPMN after undergoing TBCB. Unlike surgical wedge resection, TBCB is less invasive, cost-effective diagnostic modality, with a favorable recovery time. Awareness of the complications of TBCB including its management is warranted to make this an effective and safe diagnostic procedure. Further studies are needed to describe the role of TBCB in the diagnosis of MPMN.



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