

A Case Report of Primary Pulmonary Meningioma

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Background: Meningioma is the most common intracranial tumor, accounting 20% of brain tumors in Korea. Whereas, extracranial primary meningioma is very rare. This ectopic tumor is generally seen in head and neck, orbit, nose, and pharynx. We report a rare case of primary pulmonary meningioma in a 54-year-old male patient.

Case: A 54-year-old man was referred for further evaluation of multiple lung nodules on screening chest X-ray. He did not complain about any respiratory symptoms and did not have any specific medical and family history. There was no remarkable finding on physical examination. The initial chest computed tomography (CT) showed several variable sized nodules suspected of metastasis from extrathoracic malignancy (Figure 1-A). The abdominopelvic CT, endoscopy for gastrointestinal tract, ultrasonography for prostate were done to define primary site, but there was no abnormal findings, suggesting malignancy. A hypermetabolic nodule in right upper lobe (RUL) of lung was detected on positron emission tomography (Figure 1-B). Video-assisted thoracoscopic wedge resection of the RUL of lung was done. Histologically, the tumor consists of low grade spindle cells with frequent pseudo-inclusions forming storiform, and interlacing bundles in a collagen-rich matrix (Figure 1-C). Multifocal psammomatous calcification is present. Tumor cells show positive immunohistochemical staining for EMA. Brain magnetic resonance imaging (MRI) revealed no abnormality. He was diagnosed the primary pulmonary meningioma and have been under the follow up care.

Discussion: According to previous reports, primary pulmonary meningioma is extremely rare and usually shows benign nature with good prognosis. Although malignant cases have been reported rarely, this case was diagnosed as clinically benign primary pulmonary meningioma without CNS involvement. In conclusion, the possibility of primary pulmonary meningioma could be considered in differential diagnosis of multiple lung nodules. Moreover, CNS involvement should be excluded in patients with ectopic meningioma.

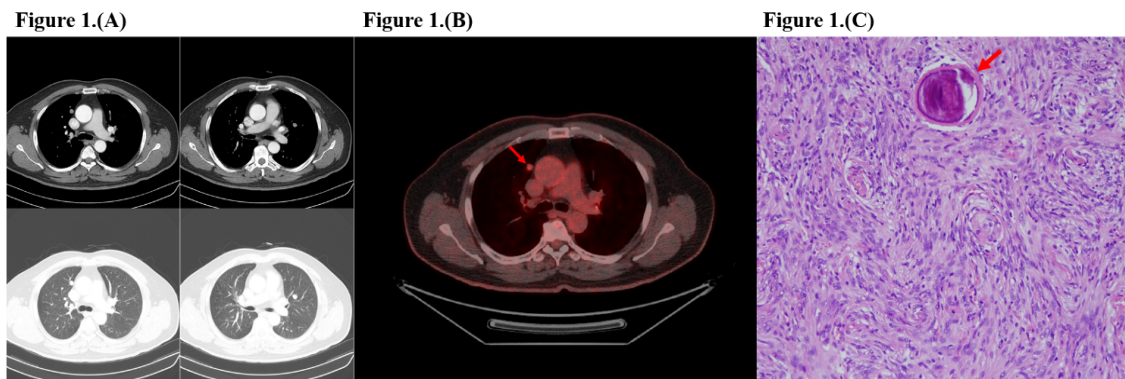


Figure 1. (A) Computed topography shows multiple variable sized nodules in both lungs. (B) PET/CT shows the hypermetabolic nodule (red arrow, SUV max~3.1) in right upper lobe. Wedge resection of right upper lobe of the lung, including the nodule (red arrow) was done. (C) Intrapulmonary meningioma (H&E). Whorling spindle cells with pseudo-inclusions (red arrow), collagenous matrix, and psammomatous calcification supporting the diagnosis of meningioma.