

Metabolic imaging characteristics of a rare disseminated synovial sarcoma diagnosed by brain biopsy

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Abstract

65 years old female patient with diagnosis of supratentorial mass was operated. F-18 FDG PET/CT was performed for determination of primary tumor of the lesion which was assumed to be metastatic. However metabolic imaging revealed multiple lesions all over the body additionally the pathology revealed this exceptional case with synovial sarcoma as the primary diagnosis.

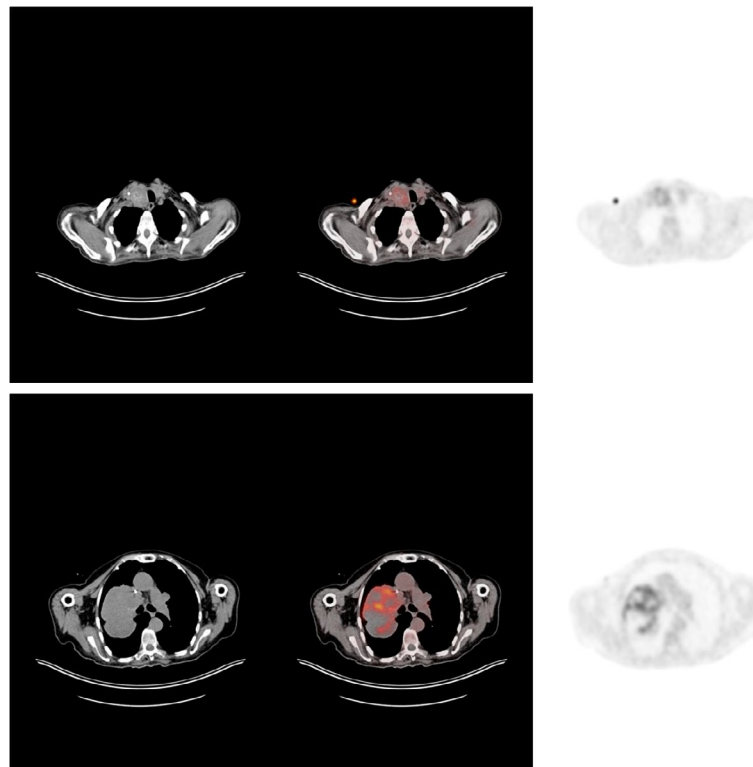


Figure 1. A 65 year old woman with the diagnosis of brain mass lesion was referred for FDG PET/CT imaging. The patient fasted for 10 hours before the imaging study and 7 mCi F-18 FDG was administered via venous line and waited for one hour. PET/CT imaging was performed in craniocaudal direction from head to feet with low dose noncontrast enhanced CT. The images showed postoperative changes in the brain region as well as mediastinal 100 mm (SUVmax=33.4) and left adrenal 36 mm (SUVmax=12.3) hypermetabolic mass lesions and bilateral thyroid nodules accumulating FDG (SUVmax=8.2)

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Key words: sarcoma, FDG, PET/CT, brain

Received: December 12, 2019; **Accepted:** January 07, 2020; **Published:** January 09, 2020

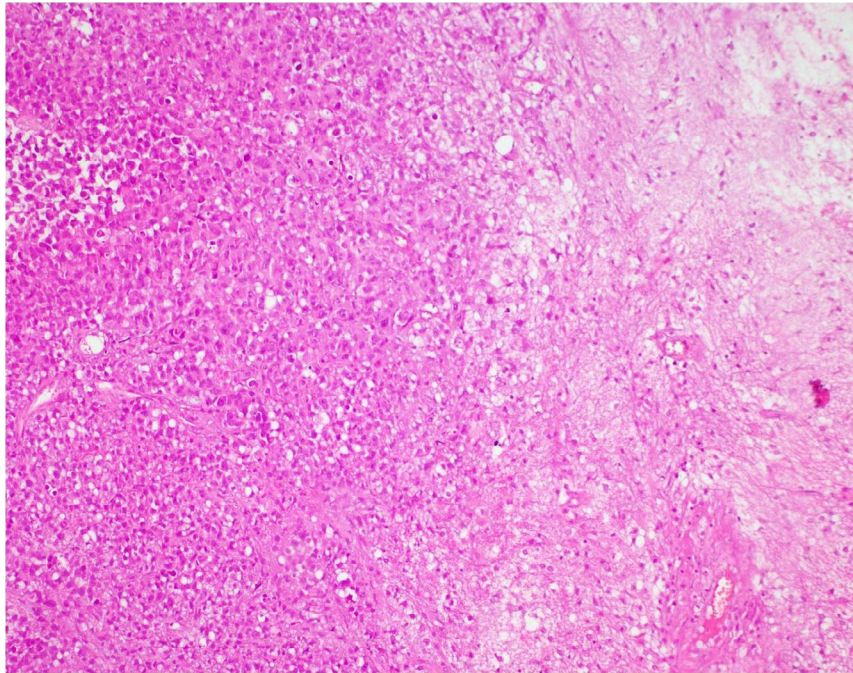


Figure 2. Biopsy results revealed snovial sarcoma obtained from the brain. Synovial sarcoma is a mesenchymal tumor however sarcoma arising from brain region is extremely rare and disseminated sarcoma in multiple regions has not been reported previously as far as we know. Previous case reports presented epithelioid sarcoma of the temporal space [1] which was also rare in the head and neck region. F-18 FDG PET/CT findings of an spinal cord mesenchymal chondrosarcoma with significant FDG uptake was also reported in a previous case report [2]. Another case report with brain and lung histiocytic sarcoma with F-18 FDG PET/CT findings showed hypermetabolism in the determined lesions of the patient [3]. The current case presented as a brain mass at first presentation and F-18 FDG PET/CT demonstrated additional multiple hypermetabolic mass lesions all over the body. Unfortunately, the brain lesion was operated at the time of imaging thus could not be characterized. This case report determines the first case of disseminated synovial sarcoma as shown by FDG PET/CT

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