Interesting image

Multiple leiomyosarcoma foci in $^{18}$F-FDG PET-CT

Múltiples focos de leiomiosarcoma en $^{18}$F-FDG PET-TC

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A 42-year-old woman complaining of growing masses on her arms and shoulders for 4 months was referred to our clinic for determination and description of metabolic activity of the masses with 18-fluoro-2-deoxyglucose ($^{18}$F-FDG) PET/CT. Multiple $^{18}$F-FDG foci were detected at the same localizations of the masses (Fig. 1). Leiomyosarcoma was proven histopathologically in the soft tissue lesion localized at the left arm.

Whole body (A) and some transaxial (B–E) images are shown in Fig. 1. Increased $^{18}$F-FDG uptake was seen in the multiple masses in the neck, back, chest, abdomen, pelvis, both lower and upper extremity muscles ($SUV_{max}$: 1.9–9.5). An area of decreased uptake in left thyroid lobe is also noticed.

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extremity muscles (SUVmax: 1.9–9.5). 18F-FDG PET-CT was not able to help to detect primary tumor; however, we suggested to get histopathological verification from the most hypermetabolic focus. Tru-cut biopsy was performed from soft tissue lesion which is localized at the left arm. Leiomyosarcoma was proven histopathologically. In patient’s history, it was learnt that the patient had hysterectomy because of uterine leiomyoma two years ago; the pathology of specimen was reported as atypical leiomyoma. Reevaluation of the specimen revealed leiomyosarcoma focus in hysterectomy material. There is also slightly increased 18F-FDG uptake in both thyroid lobes, with an area of decreased uptake in the left lobe. In following days, a thyroid ultrasound study was performed and it was thought to be associated with thyroiditis. Fine-needle aspiration biopsy was suggested for the nodule in left lower lobe that was appropriate with decreased uptake in the left lobe in PET-CT. Histopathological results were suspicious for malignancy and suggested total thyroidectomy for final decision.

Uterine leiomyosarcomas are rarely seen in females. They account for 5–10% of soft tissue sarcomas and represent only 1.3% of all uterine malignancies. They are highly malignant and have a very poor prognosis. Uterine leiomyosarcomas may originate from the smooth muscle fibers of the uterus.1 In the literature, it was suggested that if magnetic resonance imaging is suspicious for malignant transformation, PET-CT should be performed.2 Metastases of uterine leiomyosarcomas are common and seen especially in lung, bone, liver and paraaortic areas. Some unusual metastasis was reported in the literature. Sternal metastasis and intracranial dural metastasis3 were demonstrated recently. There is no leiomyosarcoma with multiple metastatic masses in 18F-FDG PET-CT as our case reported in the literature.

References