



Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

DETECTION OF CARDIAC METASTASIS BY F-18 FLUORO-2-DEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY

Poster Contributions

Poster Hall B1

Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Non Invasive Imaging: Advances in Nuclear Imaging

Abstract Category: 19. Non Invasive Imaging: Nuclear

Presentation Number: 1208-048

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Background: Whole-body F-18-Fluoro-2-Deoxyglucose (F-18-FDG) Positron Emission Tomography (PET) has been shown to be useful in the diagnosis and staging of various malignancies. FDG uptake in the myocardium can be physiologic or pathologic. We report a few cases that illustrate appearances of cardiac metastases on FDG-PET scans of various cancers.

Cases: Case 1: Patient is a 75 year old woman with non-small cell lung cancer. Whole body PET-CT showed a right lung mass, pleural mass and an apical cardiac mass. Case 2: 48 year-old woman with a history of leiomyosarcoma involving her right foot. F-18-FDG PET-CT scan which revealed uptake in multiple bones, lungs, and a mass in the right pericardium that was inseparable from the right ventricle. Echocardiography showed a mass attached to RV free wall. Case 3: 58 year-old man who has a history of chondrosarcoma of the left femur with metastasis to the brain. Whole body PET-CT showed worsened brain metastatic lesions in addition to multiple metastases and a lesion with intense uptake involving interventricular septum of the heart. Case 4: 33 year-old woman with a history of AIDS found to have diffuse large B cell lymphoma. PET-CT scan which showed avid foci involving both heart ventricles, the right atrium (RA) and interventricular septum with a soft tissue mass adjacent to the RA.

Conclusion: These cases illustrate that although physiologic cardiac uptake-both focal and diffuse is common, cardiac metastasis should be considered in the appropriate clinical context.

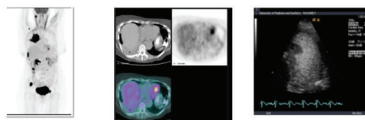


Figure 1: Squamous cell carcinoma metastatic lesion involving the inferior wall of the heart close to the

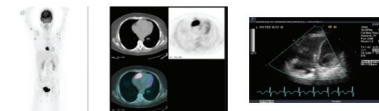


Figure 2: Leiomyosarcoma metastatic lesion involving the right ventricle free wall

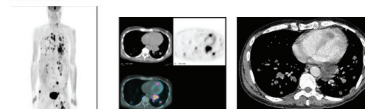


Figure 3: Chondrosarcoma metastatic lesion involving the interventricular septum of the heart

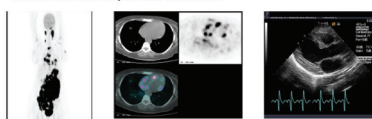


Figure 4: Metastatic lymphoma lesion involving the intraventricular septum.