Interesting images

Intramedullary metastasis detected with $^{18}$F FDG-PET/CT

Detección de metástasis intramedular con $^{18}$F FDG-PET/CT

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We report $^{18}$F FDG-PET/CT images of MRI-correlated spine metastasis from non-small cell lung cancer (NSCLC). A 50-year-old woman was admitted to hospital with shortness of breath, chest pain, back pain and hemoptysis. She had a diagnosis of non-small cell lung cancer by lung biopsy. $^{18}$F FDG-PET/CT study was carried out for staging. PET/CT imaging showed a gross mass in the upper lobe of the right lung, mediastinal, right cervical and supraclavicular metastatic lymph nodes, liver metastasis and multiple bone and muscle metastasis. Also, there was an increased FDG uptake in the spine in the level of 11th thoracic vertebrae (SUVmax: 6.9). This focal lesion was an intramedullary metastasis. Correlation with MRI showed that intramedullary mass showed an heterogeneous contrast enhancement. This image was suggestive of malignant lesion (Figs. 1 and 2).

PET/CT has greater sensitivity, specificity, and accuracy than CT scan in preoperative staging of the NSCLC and is recommended as the final confirmatory investigation in NSCLC. Whole body PET/CT imaging is also a valuable method for extrathoracic staging. PET/CT can identify noncerebral metastatic disease not detected by conventional techniques in up to 20% of patients. Intramedullary metastasis is a rare entity in NSCLC. Most intramedullary metastasis is diagnosed by contrast-enhanced MRI. In our case, the metastasis was discovered by whole body PET/CT imaging and confirmed by contrast-enhanced MRI.

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Fig. 1. A 50-year-old woman with a history of shortness of breath, chest pain, back pain and hemoptysis diagnosed as lung cancer. The patient was done PET/CT for initial imaging. PET/CT showed an increased FDG uptake in the spine at the level of 11th thoracic vertebrae (SUVmax: 6.9). This focal lesion was an intramedullary metastasis.
Fig. 2. Gadolinium enhanced magnetic resonance imaging showed a nodular lesion in the spine at the level of 11th thoracic vertebrae. This lesion was associated with metastasis.

Further reading

