



PDF Complete
Your complimentary use period has ended.
Thank you for using PDF Complete.

[Click Here to upgrade to Unlimited Pages and Expanded Features](#)

f Unknown Primary)

Room: Hall Z

P545 Detection of unknown primary tumors using 18F-FDG PET/CT

H. Fernandes, P. Iapa, G. Costa, J. Correia, J. Pedrosa de Lima;

Aim: Tumors of unknown primary (TUP) accounts for 3-5% of all new cancer diagnosis and is the seventh most common malignancy. TUP is defined as a biopsy proven malignancy whose anatomical origin remains unidentified after passing through extensive diagnostic evaluation. Overall, the PET detection rate of the primary lesion is about 39%. The purpose of our study was to evaluate the clinical value of ^{18}F -FDG PET in patients with the clinical information of TUP, who performed a scan in our institution during a five year period. **Materials and Methods:** We retrospectively reviewed the charts of 80 patients (33 women; 47 men, mean age 60.3 ± 12.9 years) referred for a ^{18}F -FDG PET/CT scan because of metastases from unknown primary sites (13 patients with metastatic cervical adenopathy; 67 patients with extracervical metastases), between January 2005 and January 2010. Only patients with histologically or cytologically proven malignancy and who underwent an extensive diagnostic work up previous to the PET/CT scan were included. PET images were obtained 45 to 60 minutes after ^{18}F -FDG injection and low dose CT images were used for attenuation correction and anatomic mapping. Correlative final histopathologic/cytologically findings and clinical follow-up (for a mean period of 24.9 months) were used to assess the results of ^{18}F -FDG PET/CT. **Results:** Of the 80 patients evaluated, 48 (60%) showed abnormal tracer accumulations. In 38 (47.5%) of those 80 patients ^{18}F -FDG PET/CT was true positive, identifying, more frequently, the primary tumor in the lung and oropharynx. In 10 (12.5%) of the 80 patients ^{18}F -FDG PET/CT was false positive and in 14 (17.5%) did not reveal lesions suspected to be the primary; however, primary tumors were found in these 14 patients during clinical follow up (false negatives). In 18 (22.5%) of the 80 patients ^{18}F -FDG PET/CT did not reveal lesions suspected to be the primary; however, primary tumors were not found in these patients at clinical follow up. **Conclusion:** In our experience ^{18}F -FDG PET/CT had a true positive result of 47.5% in the detection of the unknown primary tumor in patients referred with a TUP diagnosis. We believe that our results favor the use of ^{18}F -FDG PET/CT in an earlier stage in the TUP diagnostic workup but further clinical research and cost-benefit analysis is still necessary.