Re: Thyroid incidentalomas in FDG-PET/CT: prevalence and clinical impact

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Published online: 6 March 2012
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Dear Editor,

We read Dr. Bonabi et. al [1] article with great interest as we have pursued this topic in our center over the years [2–4]. We practice at a busy international multiple myeloma referral center so we have a busy nuclear medicine/PET practice with abundant PET data. We agree with the authors that incidental focal thyroid lesions on PET CT should be taken seriously. They should be pursued as any thyroid nodule is, when encountered clinically or incidentally, by ultrasound directed fine needle aspiration biopsy and further expectant management based on cytology.

Diffuse thyroid uptake on PET/CT is not a concern for malignancy and is indicative of thyroid disease which may ultimately require medical management [2].

With regards to focal thyroid uptake on PET/CT, our group has come to some slightly different conclusions regarding interpretation of the PET data [3]. In our recent study, 23,384 PET and PET/CT scans performed between December 2001 and April 2011 were reviewed. Incidental thyroid uptake was noted in 1,309 PET scans (5.17%), focal uptake in 690 (2.95%) and diffuse uptake in 619 (2.64%). Malignancy was identified in 27% of patients with focal uptake, 89% of which were primary thyroid malignancies. A significant difference between malignant SUV_{max} and benign SUV_{max} was found (mean $\pm$ SD = 7.04 ± 7.88 for malignancies vs. 3.85 ± 3.06 for benign tumors, $P = 0.0292$). Receiver operating characteristics

curves (ROC) were constructed on patients with PET data within 3 months of diagnosis, and indicated that a SUV_{max} of 4.2 differentiated maximally between benign and malignant lesions. Serial SUV uptake measurements of thyroid lesions obtained incidentally for other oncologic surveillance had no significant change over time.

Incidental focal thyroid uptake on PET/CT has the most clinical significance for possible malignancy of any other type of thyroid “incidentalomas” detected by other imaging modalities (CT, MR, U/S). These lesions should be approached according to best practices as recommended by current guidelines on thyroid nodule evaluation.

Sincerely,

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