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Nuclear Medicine

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Epiglottis Cancer

Fig. 1 Neck CT

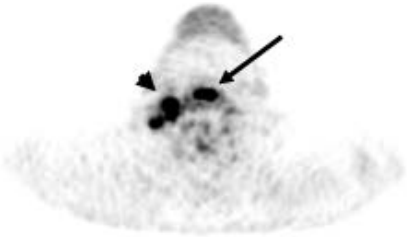

Fig.2 Transverse PET neck

Fig. 3 Coronal PET

This 65-year-old man presented with a right neck mass and no other symptoms. A neck and chest CT with contrast (Fig.1) showed a soft tissue tumor (arrow head) posterior to the carotid artery and anterior to the jugular vein. Initial diagnostic considerations on CT were glomus vagale paraganglioma, carotid body paraganglioma and glomus jugularis paraganglioma. No other abnormalities were reported.

A PET scan was obtained which showed:

- Several contiguous foci of markedly increased FDG uptake in the neck, laterally to the right (Fig. 2 & 3, arrow heads) corresponding to the right neck mass described on CT (Fig. 1, arrow head), and suggestive of matted malignant lymph nodes.
- Intense FDG uptake (max SUV: 26.3) in the region of the epiglottis (Fig. 2 & 3, arrow) suggestive of a **primary epiglottis cancer**.

FNA of the neck mass was positive for squamous cell carcinoma. Fiberoptic laryngoscopy revealed a small erythematous mass on the anterior surface of the epiglottis. The patient was taken to surgery. The epiglottic mass was biopsied. Bilateral neck dissection was then performed. The biopsy of the epiglottic tumor was positive for infiltrating, moderately differentiated squamous cell carcinoma. The specimen from the right neck showed multiple metastatic lymph nodes. The left neck content was free of tumor.

How did the PET help?

The PET identified the primary tumor, guided the physical examination and biopsy, and excluded distant macroscopic metastasis.

In a recent study involving 50 patients looking at the value of PET for detection of unknown primary tumors in patients with cervical metastasis, PET sensitivity and specificity was 100% and 94% respectively. Six patients had distant metastasis detected exclusively by PET(1).

(1) Eur J Nucl Med Mol Imaging 2002;8:1024-1030