



e: sentinel lymph node

Room: Hall G

OP167 Detection and Localization of Sentinel Lymph Nodes in Patients with Melanoma. The Added Value of SPECT/CT

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Aim: To evaluate the added value of an integrated SPECT/CT system, over conventional planar lymphoscintigraphy, for anatomic mapping of the sentinel lymph nodes (SLN) in patients with operable melanomas. **Materials and Methods:** Between April 2009 and March 2010, thirty patients (15 male and 15 female, age range 34-81 years, mean 57.9 years) with malignant melanomas of the skin were evaluated for detection and localization of SLN, by using both planar lymphoscintigraphy and SPECT/CT. Planar and SPECT/CT images were interpreted in separate and later compared to surgical information for a correct anatomic localization. **Results:** The melanoma lesions were located on the head in 5 patients, on the trunk in 6, on the upper extremity in 3 and on the lower extremity in 16. All the melanomas of the head had concordant drainage to cervical lymph nodes but 4 of them also exhibited drainage to the post-mandibular nodes, correctly localized by SPECT/CT but not by planar lymphoscintigraphy. Of the 6 trunk melanoma lesions, 2 had bilateral axillar drainage and 1 had bilateral inguinal drainage; SPECT/CT correctly localized the SLN as superficial or deep in the nodal basin, information not given by the planar lymphoscintigraphy; 1 patient of this group had drainage to both axillar and cervical lymph nodes, these last ones only visualized by SPECT/CT; 2 patients showed drainage to inguinal nodes and to first order SLN in the iliac-obturator region, this additional anatomical information only provided by SPECT/CT. Of the 3 upper extremity lesions, 2 had a single nodal basin in axilla and 1 had drainage for 3 different sites, 2 for the epitrochlear-midhumeral region, anatomical information provided by SPECT/CT and 1 for the axilla. In the lower extremity melanoma group, the 16 lesions had concordant drainage to the inguinal nodes and were shown both by planar lymphoscintigraphy and SPECT/CT; nevertheless, SPECT/CT had a clear advantage for the correct anatomical localization (deepness), helping the surgical approach. On a patient basis, SPECT/CT had an overall added value over planar lymphoscintigraphy in 90% of the cases (27/30). **Conclusions:** SPECT/CT is a useful imaging tool in melanoma patients, with an added value over planar lymphoscintigraphy for the detection of SLN and the anatomical mapping of lymph drainage. It provides more reliable information to the surgeon about the anatomic location and depth of SLN and shows the relationship between sentinel nodes and other anatomic structures.