

How long the lymphoscintigraphy imaging should be continued for sentinel lymph node mapping ?

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Abstract

Objective: We assessed the need for delayed lymphoscintigraphy imaging for sentinel lymph node (SLN) biopsy in stage I and II breast cancer patients using intradermal injection of ^{99m}Tc-antimony sulfide colloid. **Method:** Seventy-five patients with early-stage breast cancer were included in our study. Periareolar intradermal injections of 0.5 mCi/0.2 mL ^{99m}Tc-antimony sulfide colloid was used for the patients without previous excisional biopsy (20 patients). Two intradermal injection of 0.5 mCi/0.2 mL ^{99m}Tc- antimony sulfide colloid was used on each side of the demal incision in patients with the history of excisional biopsy (20 patients). Anterior and lateral static images were taken at 2 min. If SLN was not visualized, delayed imaging at 5, 10, 20, 60, 90, 150, and 180 min was done (till the visualization of the SLN or 180 min). SLN was performed by the combination of gamma probe and blue dye during surgery. **Results:** Sentinel lymph node detection rate was 96% (72/75). SLNs were detected on the immediate (2 min) images in 20 (73.33%) patients. In the remaining patients, the SLNs were detected first on the 5-, 10-, and 20-min images in 10 (13.33%), 5 (6.66%), and 2 (2.66%) patients, respectively. In three patients (4%), SLN was not detected by lymphoscintigraphy even on 180-min images. During surgery, SLN was not detected in these three patients either. **Conclusion:** Considering the rapid flow of ^{99m}Tc- antimony sulfide colloid in our study, lymphoscintigraphy imaging can be completed in the nuclear medicine department without any delay in sending the patient back to the surgery department. Thirty minutes after radiotracer injection seems to be the optimal time for lymphoscintigraphy and delayed imaging beyond 20 min would not be necessary. © 2009 The Japanese Society of Nuclear Medicine.

Author keywords

^{99m}Tc-antimony sulfide colloid; Breast cancer; Delayed imaging; Lymphoscintigraphy; Sentinel lymph node

Indexed Keywords

EMTREE drug terms: antimony technetium sulfide tc 99m

EMTREE medical terms: adult; article; axillary lymph node; breast cancer; cancer patient; cancer staging; early cancer; female; human; human tissue; image analysis; lymph node dissection; lymph node metastasis; lymphoscintigraphy; major clinical study; priority journal; sentinel lymph node; sentinel lymph node biopsy

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Medline is the source for the MeSH terms of this document.

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