

Identification of sentinel lymph node in breast cancer by lymphoscintigraphy and surgical gamma probe with peritumoral injection of scintimammographic agent “ ^{99m}Tc MIBI”

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The purpose of this study was to evaluate the efficacy of lymphoscintigraphy and the surgical gamma probe (SGP) with peritumoral injection of ^{99m}Tc MIBI in sentinel lymph node (SLN) detection in breast cancer regardless of whether metastatic or not. **Method:** Thirty patients with T1/T2 breast cancer had peritumoral injections of ^{99m}Tc MIBI (74 MBq/0.2 ml at 4 different locations) at 2, 6 and 24 hours before surgery. Anterior, anterolateral, and lateral spot images were taken at 10, 30, 45, 60 and 120 minutes. Counts were collected from the injection site, affected breast tissue, internal mammaries, axillary and supraclavicular regions, and the contralateral side. Peritumoral blue dye was also injected at surgery. The first lymph nodes with counts twice the background tissue and/or with blue dye uptake were surgically isolated, and histopathological evaluations were made. Modified radical mastectomy was performed on all patients. **Results:** 23/30 patients had lymph nodes in scintigrams and the sentinel lymph nodes were identified with SGP in 25/30 patients. **Conclusion:** Lymphoscintigraphy and subsequent SGP detection with peritumoral injection of ^{99m}Tc MIBI can be used for identifying SLN in breast cancer.

Key words: ^{99m}Tc MIBI, lymphoscintigraphy, surgical gamma probe, breast cancer, sentinel lymph node