

SPECT CT LYMPHOSCINTIGRAPHY IN LOCALISATION OF SENTINEL NODE IN BREAST CANCER

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Introduction: The introduction of sentinel node biopsy (SNB) in breast cancer management promises to confine a therapeutic axillary procedure to patients who have a positive SNB, those with negative SNB requiring no further treatment to the axilla. To localize a sentinel node is crucial in all terms. So here we use single photon emission computed tomography fused with computed tomography (SPECT-CT) lymphoscintigraphy method along with intraoperative localization of sentinel node for dissection. These were labelled as level I, II or III nodes (axillary) or any other site visualized.

Methods: We have localized the sentinel node using a radioactive isotope injection, which is filtered Tc-99m sulphur colloid (20-40 MBq) is followed by planar and SPECT-CT lymphoscintigraphy and a hand held probe at surgery is used to locate the sentinel node. The sentinel node, once localized, is removed and sent separately for histological examination and this is followed by primary surgery for the breast cancer and an axillary node clearance if required.

Results: We have performed this procedure in 39 patients so far and were able to localize the sentinel node in 33 patients by lymphoscintigraphy method (SPECT-CT) and in 35 patients by gamma probe method intraoperative. 33 times out of 33 patients, we have visualized level I node (100%) on SPECT-CT lymphoscintigraphy. We have also localized level II node in 11 patients (33%), level III node in 2 patients (6%), ipsilateral internal mammary node in 1 patient (3%) and ipsilateral supraclavicular node in one patient (3%). Out of 35 patients, 7 patients had a positive sentinel node and 26 patients had negative sentinel nodes.

Conclusion: We conclude from our early results that the sentinel node in breast cancer can be accurately localized using a combination of methods. SPECT-CT lymphoscintigraphy is very helpful in exact localization of the nodes in axilla as well as in other locations. However this is very initial data with limited number of patients which should be further continued with large number of patients in our population.

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