

Results Comparison for an Ultrasonography Study of Breast Cancer Axillary Lymph Nodes and a Pathological Study of the Sentinel Node Biopsy

Miho HIRANO¹, Naomi KUSANO¹, Junichi NAGASAWA¹, Toshinari YAMASHITA²,
Shinichirou HORIGUCHI³, Yoshikazu OZAKI¹

Abstract

Purpose: The differences between ultrasonography and pathological findings of axillary lymph nodes in breast cancer patients were evaluated retrospectively.

Subjects and Methods: Between September 2010 and October 2011, in the Tokyo Metropolitan Cancer and Infectious Diseases Center Komagome Hospital, 137 patients were diagnosed as having breast cancer and no palpable swelling of their lymph nodes; they had undergone ultrasonography preoperatively and afterwards, a sentinel lymph node biopsy of the axillary lymph node. There were some false negative cases that were diagnosed with no lymph node involvement in the ultrasonographic examination, but lymph nodes involvement was proven pathologically. There were also some false positive cases that were diagnosed with lymph nodes involvement in the ultrasonographic examination, but no lymph node involvement was seen pathologically. Eight ultrasonographers reevaluated the false negative and false positive cases retrospectively.

Results and Discussion: Four or more ultrasonographers reevaluated 9 of 11 examples as negative, and four or more ultrasonographers judged 2 examples as positive among false negative cases. Four or more ultrasonographers reevaluated 6 of 9 examples as positive, and four or more ultrasonographers judged 3 examples as negative among false positive cases. When making a cautious inspection on an object with a minor axis of 5 mm or more in length, the object with a thick cortex portion and the object with an increased number of lymph nodes in comparison with an unaffected side might be accepted, the number of false negative decisions might be able to be reduced. For an object with a minor axis of 5 mm or more in length, the presence of round swelling and the hilum of the lymph node in the ultrasonography images were commonly taken as indications of lymph node involvement. But among cases showing two or more of these findings, pathologically negative case was observed in 6 cases.

Conclusion: The possibility was found for raising the accuracy of assessing lymph node involvement by ultrasonographic examination when some combinatorial findings were evaluated. There are positive lymph nodes that cannot be described in ultrasonography images and there are differences in interpretation even if the same diagnostic criteria are used among ultrasonographers. Further research is necessary to reduce the differences between results of ultrasonography and biopsy evaluations of lymph node involvement.

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Keywords

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¹The department of clinical examination, ²The mammary gland surgery, ³The department of pathology, Tokyo Metropolitan Cancer and Infectious Diseases Center Komagome Hospital, 3-18-22 Honkomagome, Bunkyo,1130021,Tokyo

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