

The Accuracy of Ultrasonography in the Diagnosis of Breast Pathology in Symptomatic Women

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Abstract

Background: Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among females, accounting for 23% of total cancer cases and 14% of cancer deaths worldwide. The developing countries are catching up with this trend. Breast ultrasound when properly performed and interpreted, is an indispensable tool in breast imaging. The early diagnosis and treatment of breast masses reduces the morbidity and mortality associated with delayed diagnosis of breast carcinoma. The use of breast ultrasound is gaining ground in recent time, this is due to current advances in ultrasound technology which permit greater spatial and contrast resolution and shortened scan time.

Objective: To determine the sensitivity, specificity and positive predictive value of ultrasound in the detection of palpable breast masses and to correlate the findings of ultrasound with the findings of fine needle aspiration cytology, or histopathology.

Methods: Breast ultrasound scanning was done in 100 patients with signs and symptoms of breast lesion referred from the Surgical out Patient Clinic to the Radiodiagnosis Department of Lagos University Teaching Hospital (LUTH). Histology reports were collected from either the case note or Morbid Anatomy department to correlate the findings with ultrasound diagnosis.

Results: The mean age was 41.7 ± 11.34 (18-59) years. Symptoms of breast lesion were highest in the age group 41-50 years 38 (38%), and least in 18-20 years 4 (4%). When the use of ultrasonography was compared with the histopathology report in the diagnosis of breast lesion in the studied population, the sensitivity was 100%, specificity (96.6%), accuracy (97%), posting predictive value (PPV) 81.3%, and negative predictive value (NPV) 100%. The accuracy, specificity and PPV however decreased with increasing age.

Conclusion: Ultrasonography of the breast is useful in the diagnosis of breast lesions, because of the high sensitivity, specificity and diagnostic value it exhibited with histopathologic findings.

Key words: Breast pathology, Accuracy, Ultrasonography.

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