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Clinical indications for mammography in men and correlation with breast cancer

Kyungmin Shin

The University of Texas, MD Anderson Cancer Center, USA

Purpose: To examine presenting clinical symptoms and imaging findings and correlate them with biopsy-proven breast cancer in men.

Method & Materials: 429 male patients who presented for mammography at one institution between January 2004 and December 2014 were retrospectively evaluated. Of the 429 patients, 291 presented with clinical symptoms for diagnostic mammography and 138 presented for screening mammography. The presenting clinical symptoms in 291 patients were recorded and correlated with imaging (mammography and sonography) and histopathology findings.

Results: A total of 291 patients were included. Multiple symptoms were possible and there were a total of 318 clinical symptoms. 190 (60%) presented with palpable abnormalities, 44 (14%) with non-focal pain, 31 (10%) with swelling, 14 (4%) with breast enlargement, 13 (4%) with focal pain, 13 (4%) with other symptoms, 7 (2%) with skin changes and 6 (2%) with nipple discharge/changes. 290 patients underwent mammography and 176 patients underwent sonography. A total of 41 cancers were diagnosed, most invasive ductal carcinoma. Statistical analysis of the clinical symptoms demonstrated that nipple discharge/changes and skin changes (mostly with associated palpable abnormalities) had the highest sensitivity. Analysis of mammography findings revealed that 52 patients showed either a mass or a focal asymmetry on mammography, of which 38 (73%) were diagnosed with cancer. Only three patients (1%) who had neither a mass nor a focal asymmetry were diagnosed with cancer.

Conclusion: Correlating clinical symptoms and imaging findings can help to develop more accurate probabilities for timely and accurate diagnosis of breast cancer in men. Clinical symptoms of nipple discharge/changes, skin changes with associated palpable abnormalities and mammographic findings of masses and focal asymmetries were associated with male breast cancer. Pain, breast enlargement and swelling were unlikely to be associated with breast cancer.

Recent Publications

1. Shin K, Martaindale S and Whitman G J (2018) Male breast magnetic resonance imaging: When is it helpful? Our experience over the last decade. *Curr Prob Diagn Radio*. DOI: 10.1067/j.cpradiol.2018.01.002.
2. Shin K, Caudle A S, Kuerer H M, et al. (2016) Radiologic mapping for targeted axillary dissection: needle biopsy to excision. *AJR* 207(6):1372–1379.
3. Shin K, Phalak K, Hamame A and Whitman G J (2015) Interpretation of breast MRI utilizing the BI-RADS 5th edition lexicon: how are we doing and where are we headed? *Curr Prob Diagn Radio*. 46(1):26–34.
4. Pinell-White X A, Etra J, Newell M, Tuscano D, Shin K and Losken A (2015) Radiographic implications of fat grafting to the reconstructed breast. *Breast J*. 21(5): 520–525.

Biography

Kyungmin Shin MD is an Assistant Professor at the Department of Diagnostic Radiology at the University of Texas, MD Anderson Cancer Center, section of Breast Imaging. After obtaining her Diagnostic Radiology training at University of Virginia Health System and Breast Imaging Fellowship Training at Emory University, she began her academic career at Baylor College of Medicine, Houston, Texas, in 2013. In 2014, she joined University of Texas MD Anderson Cancer Center and currently practices multimodality breast imaging. She has a keen interest in clinical research, especially in tomosynthesis and breast MRI, and is actively participating in several clinical research projects.

kshin1@mdanderson.org