



IMAGE ARTICLE

Elevated Shear Wave Elastography Values as a New Malignancy Criteria Despite Normal Biopsy Results

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Keywords

Shear wave elastography, Breast carcinoma, Ductal carcinoma *in situ*

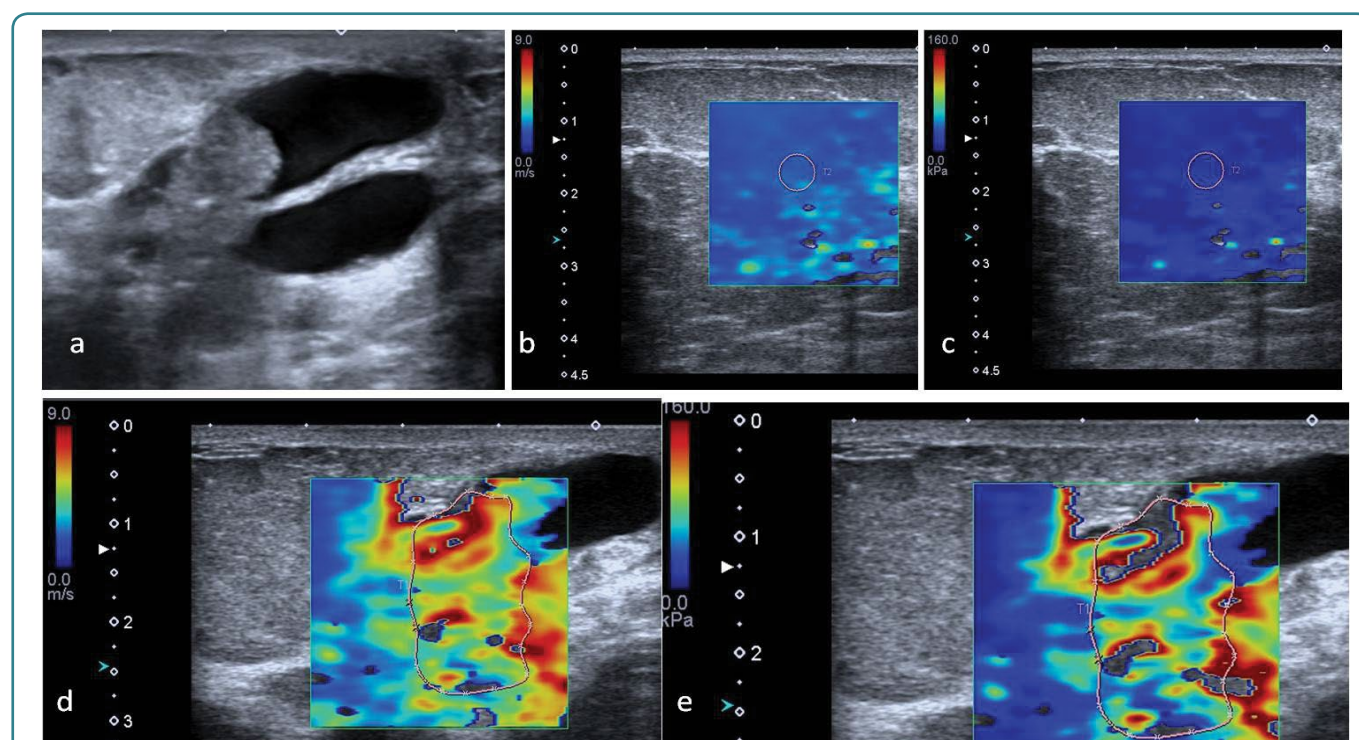


Figure 1: a) On USG image; retroareolar located intraductal solid lesion is seen; b) On SWE: Mean value of normal tissue 2.15 m/s; c) 13.9 kPa is measured in normal breast parenchyma; d) On elastographic assessment of intraductal solid lesion; mean quantitative values have revealed as 5.38 m/s; e) 80.8 kPa.

Introduction

Shear Wave Elastography (SWE) is a recently developed technique that enables detailed information on characterization of breast lesions. We reported a case that is elastography findings of breast lesion which is high grade DCIS focus within papilloma in 58-year-old female whose tru-cut biopsy has formerly resulted as benign.

Case

A 58-year-old female presented to our outpatient clinic complaining of pain with a palpable retroareolar mass on 27 × 20 × 25 and microcalcifications also were seen on mammography. Tru-cut biopsy resulted as intraductal papilloma. We draw the contour of lesion manually with free ROI which is provided by Toshiba Applio 500. On SWE; while mean value of normal tissue obtained from four quadrants 2.15 m/s and 13.9 kPa, it was 5.38 m/s and 80.8 kPa for retroareolar solid lesion (Figure 1). According to the literature this was highly significant for malignancy or aggressive subtype of Ductal Carcinoma *In Situ* (DCIS). Surgically removed lesion diagnosed as cribriform pattern DCIS focus within papilloma.

Discussion

SWE provide quantitative measurement of tissue stiffness in kilopascals and m/s can be integrated into a routine breast ultrasound examinations. Recent studies

reported that SWE can contribute to differentiate solid malignant breast masses from benign using their mean stiffness values [1]. In our case, elastographic measurements were significantly higher, supporting malignancy despite benign pathology result. Barr, et al. found that integration of qualitative and quantitative elastography measurements into BI-RADS system can facilitate accurate diagnosis [2]. Chang, et al. also revealed that tumour stiffness evaluated by SWE correlates with aggressive subtypes of breast cancer that invasive cancers with aggressive prognostic features [3]. In our case high grade focus within lesion were pathologically confirmed.

Conclusion

SWE can reduce unnecessary procedures by improving the selection of patients more appropriate for biopsy or surgery.

References

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