ABSTRACT

A COMPARATIVE STUDY ON PREDICTIVE VALUE OF MALIGNANCY IN SUSPICIOUS BREAST MASSES OF BIRADS III & ABOVE CATEGORIES USING SONOELASTOGRAPHY AND DYNAMIC MR MAMMOGRAM

AIM & OBJECTIVES:

To assess and compare the accuracy of Sonoelastogram breast and Dynamic MR Mammogram in predicting benign vs. malignant breast masses in BIRADS III & above lesions, with subsequent recommendation for biopsy.

MATERIALS AND METHODS:

Prospective cohort study conducted from August 2016 – May 2017, for a period of 10 months with 45 cases (44 female and 1 male) who present with breast masses to Out Patient Department in Government Kilpauk Medical College and Hospital, Chennai. All cases were subjected to conventional B mode Ultrasonogram; only cases with BIRADS III and above categories were assessed further by Sonoelastography and Dynamic contrast enhanced MR Mammogram. Tsukuba elastographic scoring from 1 to 5 were assigned and Dynamic MR kinetic curve patterns 1 to 3 were analysed based on contrast uptake by the lesion in initial and delayed phases.

RESULTS:

Among the Final Diagnosis (HPE) of the studied breast pathologies, 19 malignant and 26 Benign lesions are noted. Sensitivity of Dynamic MR Mammogram curve patterns is 89.5% and the specificity is 96.2%. Sensitivity of Sonoelastography is 68.4% and the specificity is 92.3%. The diagnostic accuracy of Dynamic MRI Mammogram is 93.3% and of Sonoelastography is 82.2%. The comparision between Final Diagnosis of breast masses with HPE
and Dynamic MR Mammogram curve analysis & Sonoelastography is statistically significant.

**CONCLUSION:**

Both Sonoelastography and MR Mammogram are efficient techniques to evaluate breast lesions and can potentially decrease the number of unnecessary biopsies. In our study, both the sensitivity and specificity are high for MR Mammogram compared to Sonoelastography.

**KEY WORDS:**

BIRADS, Sonoelastography, MR Mammogram, kinetic curves