Sonography as an adjunct to mammography in asymmetric retroareolar density

Anamika Jha¹, Ranjit Chaudhary², Benu Lohani¹

1.Department of Radiology and Imaging, Institute of Medicine, Tribhuvan University Teaching Hospital 2. Grande International Hospital, Nepal

**Objectives:** Retroareolar region refers to the region within two cm from the nipple and/or involves the nipple-areolar complex on mammogram (Giess et al., 1998). In this study, we evaluated the mammographic asymmetric retroareolar density with sonography (US) and studied its role as an additional modality.

**Methods:** 44 patients with unilateral mammographic asymmetric retroareolar density were evaluated with appropriate US techniques. The asymmetry was graded as - grade 1: same density as equal volume of fibroglandular tissue; grade 2: asymmetric higher density than equal volume of fibroglandular tissue; grade 3: asymmetric density with definite lesion. Pathological diagnosis was taken as gold standard. Simple statistical techniques were used for analysis.

**Results:** Mean patient age 46.39 years (27- 69 years). 80% of the lesions were benign on final pathology.

Grade 1 (14/44): All benign (mostly normal fibroglandular tissue US)
Grade 2 (21/44): 85% were benign lesions mostly cysts and mastitis.
Grade 3 (9/44): 6 were malignant masses and 3 inflammatory.

Nipple retraction seen in 5/9 patients with malignant mass.

**Discussion:** Almost 8% of breast cancers occur in retroareolar region. Mammography is relatively less sensitive in this region and US maybe a useful adjunct. In our study, US confirmed the mammographically probably benign lesions to be definitely benign in 16 of 35 cases, decreasing patient anxiety and avoiding unnecessary biopsies. It also increased likelihood of malignancy in two of the nine malignant cases.

**Conclusions:** Mild asymmetric density on mammography usually have a benign etiology which can be confirmed with sonography and safely followed up. Asymmetry with ancillary findings suggests the need for a biopsy to confirm the pathology.