INVASIVE LOBULAR CARCINOMA & LOBULAR NEOPLASIA:

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Invasive lobular carcinoma comprises of 5-15% of all breast cancers. Invasive lobular carcinoma is microscopically characterized by sheets of loosely arranged invasive columns and the typical Indian file arrangements of cells in the breast tissue as opposed to forming a discreet mass seen in IDC. ILC frequently invokes very little desmoplastic reaction within the breast tissue and often encircles the ducts without disrupting the architecture. These histological features often produce subtle imaging findings with ILC compared to IDC.

Mammography:

In the setting of a dense breast the size of ILC tends to be larger than IDC at diagnosis. The planar growth pattern accounts for the highest false negative rates for mammography. Up to 16% can be mammographically occult. Of those seen, over a third are seen as vague poorly defined densities, asymmetry or distortion and maybe seen only on one view usually the CC view. Calcifications are uncommon.

Sonography:

Sonography is valuable in depicting mammographically subtle or occult ILC and guiding biopsies but may underestimate tumor size and extent. The range of sensitivity has been reported to be 68-97% with the sensitivity falling significantly in tumors less than 1cm. In a series of 208 cases of ILC, 81 were found to be mammographically occult, out of these 88% were detected on ultrasonographically. Sonography may reveal heterogeneous mass, posterior acoustic shadowing; focal areas of shadowing without any discrete mass or may appear lobulated, well circumscribed mass mimicking benign pathology. Lack of ultrasonographic findings in an appropriate clinical setting should not deter one from a biopsy of the suspicious area.

MRI:

Several studies have shown the potential of Breast MRI affecting clinical management of patients diagnosed with ILC. ILC also has a propensity to be multifocal (14-31%); given the limitations of conventional imaging evaluation with MRI becomes essential for the appropriate in breast staging. This is particularly important when breast conservation is being considered. MRI has been proven to detect higher extent of disease in terms of multifocality & multicentricity as well as size of the tumor.

There are three patterns of enhancement seen on MRI:

1. Solitary enhancing spiculated mass
2. Multiple enhancing foci, non-contiguous clusters interconnected by enhancing strands and intervening non-enhancing tissue
3. Enhancing septations & clusters without dominant tumor focus.

One of the limitations of MR imaging of the breast is the false positive parenchymal enhancement. Underestimation of disease has also been reported with ILC.

**Pleomorphic Lobular Invasive carcinoma:**

This subtype comprises of up to 1% of all breast cancers and tends to occur in older, postmenopausal women who present with locally advanced breast cancer. It is a histological variant of ILC and is associated with a worse clinical outcome and recurrence rate. Appropriate work up is necessary to aid adequate resection and clear margins.

**Lobular Neoplasia:**

Lobular carcinoma in situ and Atypical lobular hyperplasia is encountered, as an incidental finding is biopsies performed for another cause. They are considered as risk indicators and are often bilateral. They are seen to be associated with ILC often present extensively. They do not contribute to any imaging finding however may cause enhancement on MRI.

**Objective of the presentation:**

1. Familiarize with the appearances of ILC on all imaging modalities.
2. Understand limitation is assessment of ILC and its impact on management.
3. Understand the significance of Lobular neoplasia (ALH & LCIS)

**References:**


