Imaging Sciences Interesting Cases

CASE 11

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CLINICAL PRESENTATION: Patient presents for routine screening mammogram.

IMAGING FINDINGS: Right CC and MLO projections demonstrate a noncalcified spiculated mass in the right subareolar region posteriorly measuring up to 1.3 cm. There is an additional noncalcified mass measuring up to 0.5 cm slightly inferior and medial to the larger mass.

Ultrasound images demonstrate a hypoechoic spiculated mass.

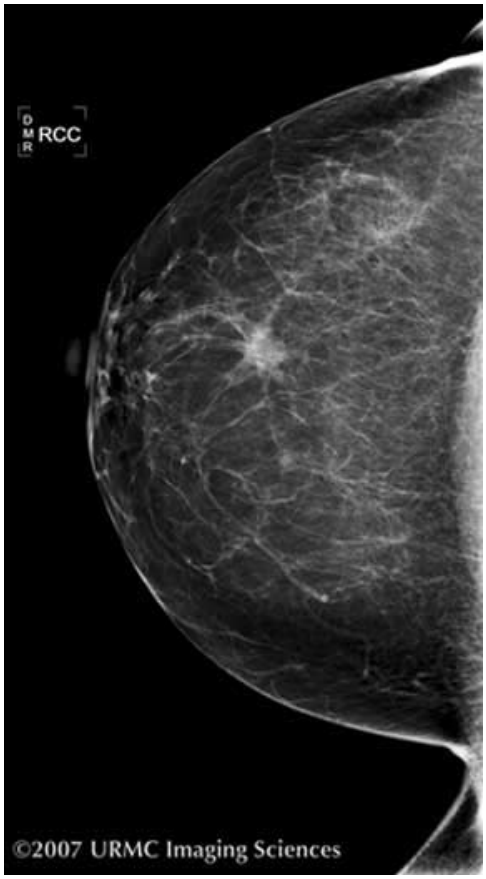

Figure 1

Figure 2

Figure 3

DIAGNOSIS: Invasive Ductal Carcinoma, Nuclear Grade 1-2

DISCUSSION: Breast cancer is one of the top two causes of cancer deaths together with lung cancer in most developed countries. Ninety-nine percent of breast cancers occur in women with 1% in men. Incidence increases with age. Breast cancer is rare in those under the age of 30, but presents in up to 1 in 14 women over the age of 70. Fifteen to 30% of breast cancers are of the in situ type whilst 70-85% are of the invasive type. Ductal carcinoma is the most common making up 80% of all breast cancers. The main risk factors for breast cancer are increasing age, family history of breast cancer, proliferative breast disease, and hormonal factors. Women who begin menstruation early, women who have a late menopause, late or few pregnancies, or who are obese also have increased risk of breast cancer.

Ductal carcinoma in situ (DCIS) is an early form of breast cancer. In this case, cells lining the ducts of the breast have become abnormal and are growing more rapidly than usual, but are not able to spread beyond the ducts. Women with DCIS are at higher risk of developing invasive ductal carcinoma.

Invasive ductal carcinoma has developed the ability to spread beyond the ducts of the breast. Ductal carcinoma of the breast spreads initially by direct invasion of overlying skin and adjacent fat. Spread into lymphatics and to lymph nodes in the axilla is the most important step, since from there it can spread to lymph nodes in the neck and supraclavicular region and into blood vessels. Once in the blood vessels, spread is possible to distant organs such as the bones, lung or liver.

Surgical treatment of breast cancer aims to achieve total disease control through removal of the primary breast tumor, along with any local extension.

References:

1. Kopans D. Breast Imaging, 2nd Ed, Lippincott Williams & Wilkins, 1998.
2. Conant E, Brennecke C. Breast Imaging: Case Review Series, Mosby, 2006.