Intracystic papilloma of the breast

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A 53-year-old woman presented for work-up of a painless nodular breast mass. She had no significant personal or family history. Mammography and ultrasound were performed, as well as additional MRI.

Mammography showed multiple large cysts in the left breast (Fig. A). Ultrasound depicted these cystic lesions and showed additional intracystic solid wall proliferations (Fig. B). An MRI examination confirmed the large cysts with solid wall components with contrast enhancement of the solid lesions (Fig. C). Since this image was suspect for malignancy, additional fine needle aspiration cytology (FNAC) was performed.

Based on the radiological (mainly ultrasound and MRI) and cytological findings, diagnosis of intracystic papilloma was made.

Comment

An intracystic papilloma (ICP) is a benign papillary lesion supported by a fibrovascular stalk, growing inside an apparent cystically dilated duct. It may occur at any age but is most commonly seen between 30 and 55 years.

It is very difficult to distinguish radiographically between ICP and intracystic papillary carcinoma (ICPC). ICP more often forms a single nodule protruding intracystically, while ICPC usually is larger (> 3 cm) and forms multiple aggregate nodules or even almost solid tumors with a small cystic part. Despite these guidelines, intracystic papillary lesions may be impossible to differentiate. The kinetic features for contrast enhancement on MRI are not helpful either since both the benign and malignant papillary lesions exhibit fast, strong, early enhancement and washout or a plateau enhancement pattern.

Therefore, FNAC should be performed on all cystic breast masses with internal solid wall proliferations. To start, FNAC can help differentiate between intracystic debris and true solid components. And second, cytologic examination can help evaluate for malignant cells suggestive of ICPC. It should be noted however, that it is best not to completely evacuate the intracystic fluid as this can make it more difficult for the surgeon to locate the lesion peroperatively. In case of small lesions a marker, mostly a hooked wire, can be placed intracystically with the intent to locate the lesion more easily during the surgery.

However, even FNAC as well as core biopsy with pathology of a intracystic papillary lesion can be misleading because cellular atypia is slight in the majority of ICPC's.

For this reason and because several studies have shown that a substantial number of lesions are upgraded in diagnosis at excision, all intracystic papillary lesions diagnosed by either imaging or cytology, should be excised surgically.

Reference