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RESEARCH ARTICLE

DUCTAL CARCINOMA IN SITU ARISING WITHIN BREAST FIBROADENOMA: A CASE REPORT AND REVIEW OF THE LITERATURE

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Abstract

Fibroadenoma is the most common benign breast tumor in women under 30. However, carcinoma arising in a fibroadenoma is unusual and very rare, with over 100 cases reported in the literature. Histological diagnosis is usually incidental. We report the case of a 51-year-old perimenopausal patient with a family history of a mother who died of breast cancer. She was admitted with a hard elastic mass in the upper outer quadrant of her left breast. Imaging revealed a heterogeneous nodule with ductal dilatation. A core needle biopsy with four specimens showed a fibroepithelial tumor with atypical ductal hyperplasia. Left breast-conserving surgery was performed for radical treatment. The diagnosis on the specimen was carcinoma in situ of intermediate nuclear grade and massive compact and cribriform type developed on a fibroadenoma. We present this case to raise awareness of this entity and highlight the need for histological evaluation of specific breast masses.

Introduction:-

Fibroadenoma (FA) is a common type of benign breast tumor, but ductal carcinoma in situ (DCIS) rarely occurs in this type of tumor.**(2)**

Its incidence varies from 0.02% to 0.125%, and it is usually discovered incidentally.**(3)**

Conservative surgery is considered an effective treatment necessary for a definitive diagnosis. There is no uniform clinical standard for postoperative adjuvant radiotherapy.

Case observation

We report the case of a 51-year-old perimenopausal patient with a family history of a mother who died of breast cancer. She was admitted with a hard elastic mass in the upper outer quadrant of her left breast.

Imaging revealed a heterogeneous nodule with ductal dilatation. A core needle biopsy with four specimens showed a fibroepithelial tumor with atypical ductal hyperplasia. Left breast-conserving surgery was performed for radical treatment.

Microscopic examination showed the breast parenchyma to be the site of a well-limited fibro-epithelial proliferation comprised of a collagenised mesenchymal component with ducts lined by an epithelial-myoepithelial double layer.

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Within this proliferation, there were foci of intermediate-grade ductal carcinoma in situ (Figure 1), of compact massive type (Figure 2) and the largest foci measured 1.3 cm in long axis, with healthy lateral and deep resection limits.

The diagnosis was a fibroadenoma colonized by an intermediate-grade ductal carcinoma in situ.

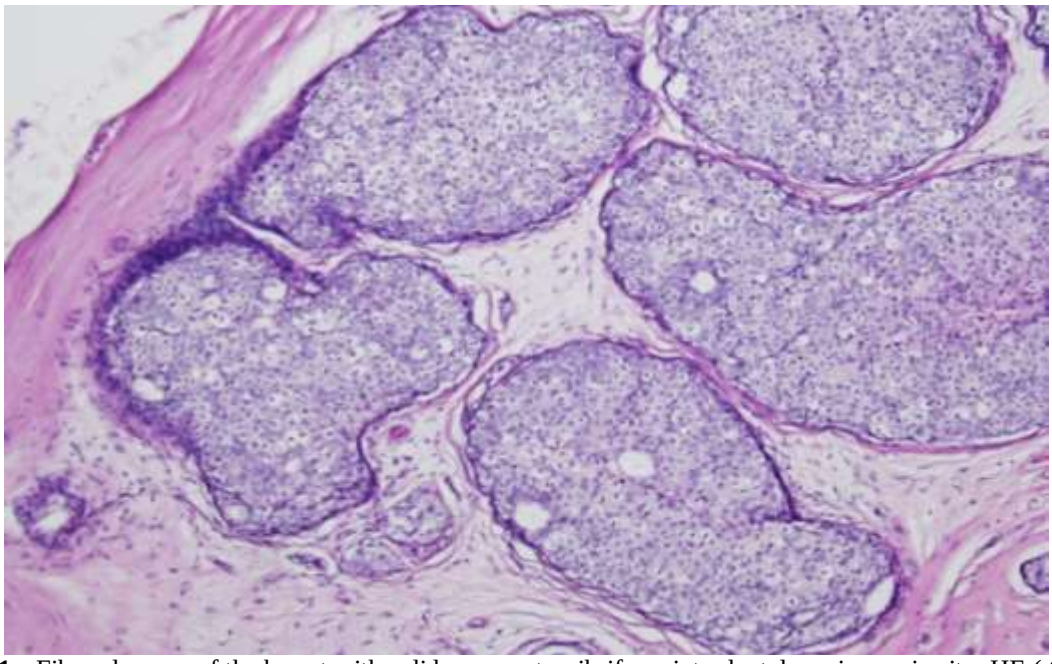

Figure 1:- Fibroadenoma of the breast with solid, compact, cribriform intraductal carcinoma in situ. HE (GX10).

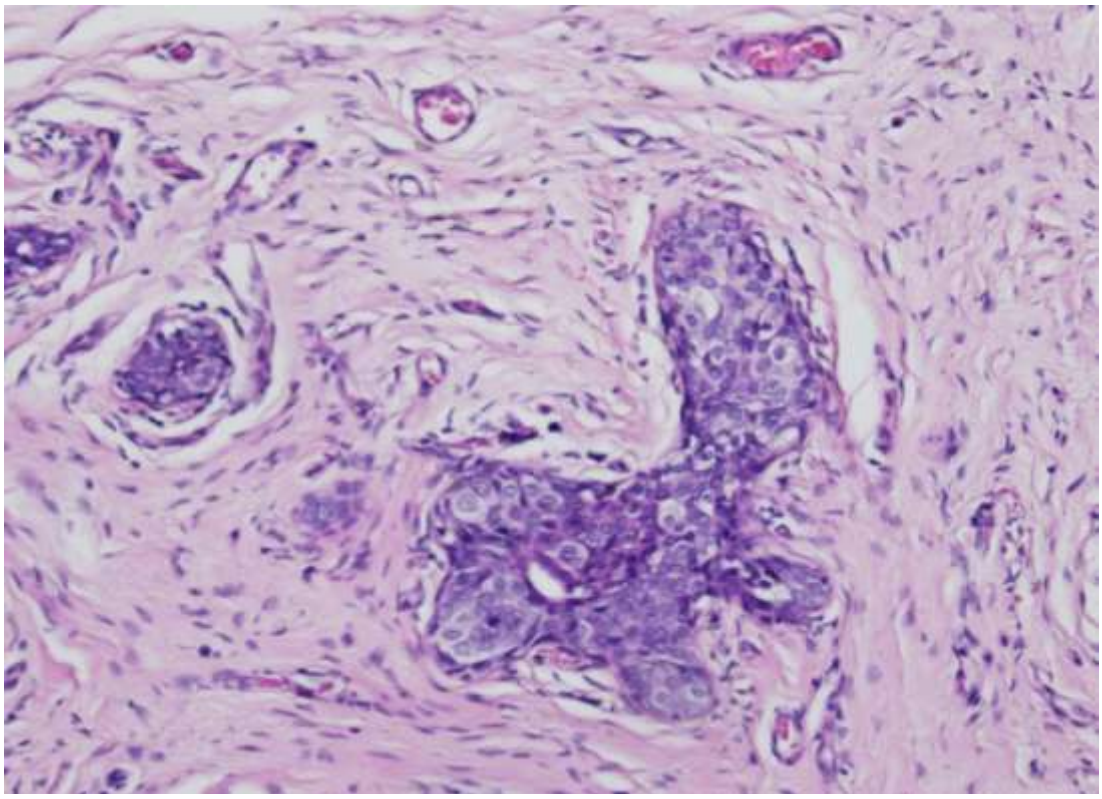

Figure 2: - Fibroadenoma colonized by intermediate nuclear grade ductal carcinoma in situ. HE (GX 10).

Discussion:-

Fibroadenoma (FA) is the most common breast tumor in young women aged between 20 and 40 but can occur at any age (1).

Ductal carcinoma in situ developing within a fibroadenoma is very rare (2).

Its incidence varies from 0.02% to 0.125% and it is mostly discovered incidentally on surgical specimens during pathological examination(3).

AF is detected clinically in the majority of cases, and a quarter of cases are identified by mammography and ultrasound. In the event of a doubtful diagnosis of heterogeneous AF, a microbiopsy should be indicated systematically, especially if the breast is enlarged and appears in an elderly woman (differential diagnosis with poorly differentiated breast cancer).

On imaging, FA containing foci of CCIS can easily be mistaken for benign lesions. The presence of spiculated contours, marked hypoechogenicity, posterior attenuation, punctiform calcifications, ductal extension, and a microlobulated appearance may help in the detection of a probable malignancy in AF(4).

The prognosis for AF colonized by carcinoma in situ is favorable.

Local recurrence or distant metastases have rarely been reported in the literature (5).

Surgery is currently considered to be an effective treatment.

Conclusion:-

In conclusion, ductal carcinoma in situ in a fibroadenoma of the breast is an extremely rare malignancy, and clinicians need to be familiar with its clinicopathological features and treatment methods. Multidisciplinary treatment is recommended to maximize patient benefit.

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