

CASE REPORT

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Atypical ductal hyperplasia – Benign lesion with malignant potential: A case report

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ABSTRACT

Atypical breast hyperplasia is a precancerous lesion with a high risk of invasive carcinoma. The atypical character of hyperplasia is confirmed by the absence of anti Ck5/6 immuno-marking in the immunohistochemical study. These lesions are difficult to identify on breast ultrasound. Magnetic resonance imaging shows non-mass enhancement which can have focal or regional distribution. We report the case of a 53-year-old woman, with a history of infiltrating lobular carcinoma of the right breast treated, in which the senological findings were in favor of atypical ductal hyperplasia of the left breast.

Keywords: Breast ultrasound, Ductal hyperplasia, MRI

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INTRODUCTION

Breast cancer is the most common cancer in women. Some benign lesions have malignant potential including ductal hyperplasia, radial scar, sclerosing adenosis, flat epithelial atypia, papillary lesions, and lobular neoplasia [1]. Atypical ductal hyperplasia is found in 5–10% of histological findings after breast biopsies. The frequency of these lesions increased after the development of breast cancer screening. The diagnosis is based on a range of clinical, radiological, and histological arguments. The management is based on surgical explantation [2]. We report the case of atypical ductal hyperplasia in a woman with a history of invasive lobular carcinoma.

CASE REPORT

A 53-year-old female patient, with a history of invasive lobular carcinoma of the right breast treated with tumorectomy and neoadjuvant chemotherapy two years ago, presented for a palpable mass in the left breast. The mammogram and the ultrasound did not find any obvious mass.

A breast magnetic resonance imaging (MRI) was performed showing a non-mass linear distribution nodular enhancement, located at the junction of the external quadrants of the left breast, measuring 3 cm with a type II enhancement curve, classifying the left breast ACR 4C (Figure 1).

There was an architectural distortion of the right breast related to the tumorectomy associated with thickening and skin retraction, without any suspicious mass or non-mass enhancement.

A second look ultrasound of the left breast guided by the MRI findings was performed showing an oval hypoechoic mass with indistinct contours without color Doppler vascularization (Figure 2A).

Ultrasound-guided microbiopsy of the lesion using a 14 Gauge automatic needle was performed and the histological features revealed lesions of atypical ductal hyperplasia (Figure 2B). A surgical excision of the lesion was indicated but the patient refused the surgery. Clinical and radiological monitoring by breast ultrasound and mammography was recommended each six months.

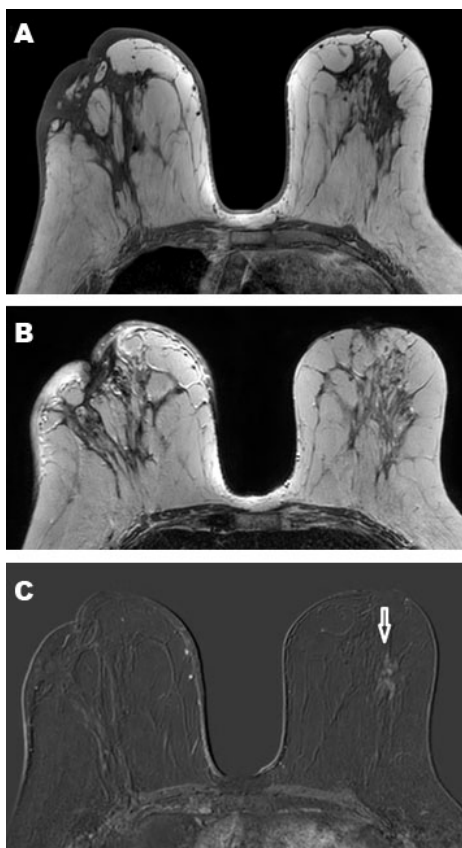


Figure 1: Breast MRI in (A) T1, (B) T2-weighted sequences with subtracted image (C) showing a nodular non-mass enhancement with linear distribution, in the junction of the external quadrants of the left breast measuring 3 cm.

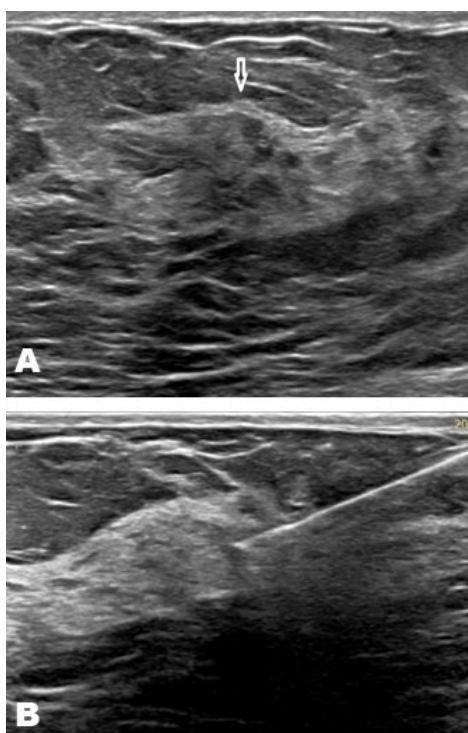


Figure 2: Breast ultrasound (A) showing a hypoechoic mass with indistinct contours of the left breast (arrow) is corresponding to the non-mass enhancement found at the breast MRI. (B) Left breast microbiopsy.

DISCUSSION

Atypical breast hyperplasia is a pre-cancerous lesion with a high risk of invasive carcinoma. According to the literature, it is correlated with a 30% risk of developing breast cancer after 20 to 25 years of follow-up. It includes 2 types: a typical canalar hyperplasia and atypical lobular hyperplasia. These two types confer an equal risk of malignant transformation [2, 3]. Atypical ductal hyperplasia is whether a lesion having all the characteristics of carcinoma in situ (Cis) but affecting only one ductule or a lesion not having all the criteria of Cis.

Several cases of atypical ductal hyperplasia have been reported in the literature. Johnson et al. reported two cases in young women, facing prolonged follow-up, one managed with observation only, and the other managed with ipsilateral mastectomy and reconstruction [4].

The diagnostic criteria for atypical and lobular canalar hyperplasia were established by David Page and his colleagues and accepted by the College of American Pathologists in 1985. Atypical ductal hyperplasia is characterized by the proliferation of dysplastic or monotonic epithelial cells of an endoluminal clonal nature [2, 4]. The atypical character of hyperplasia is confirmed by the absence of anti Ck5/6 immunolabeling in the immunohistochemical study [5]. The majority of these lesions are found in mammogram. The anomalies are most often represented by microcalcifications that can be polymorphic, amorphous, or linear. It may also show an architectural distortion focus, but a normal mammogram does not eliminate diagnosis [6, 7].

Atypical ductal hyperplasia lesions are difficult to detect on breast ultrasound which may show a hypoechoic, oval, circumscribed, or indistinct mass. Sometimes it can show microcalcifications. Ultrasound can also guide breast microbiopsy [8, 9]. Magnetic reasoning imaging shows a ductal or segmental non mass enhancement, which can have focal or regional distribution.

Sometimes, the MRI guides the second look ultrasound for subtle lesions, thus allowing microbiopsy of the lesion with anatomopathological study, as it is the case for our patient [2, 6, 9].

Ultrasound-guided percutaneous microbiopsy using an automatic needle (11–14 Gauge) is the most common way to make the diagnosis. The treatment of atypical ductal hyperplasia is based on surgical excision with anatomopathological study in order to exclude the presence of an underlying carcinoma. Clinical and radiological monitoring is the rule [5, 9].

The National Comprehensive Cancer Network (NCCN) recommends that bilateral prophylactic mastectomy should generally be considered only for women with a genetic predisposition to breast cancer, those who were treated with chest radiotherapy before the age of 30, or those with a history of lobular carcinoma in situ. However, the Society of Surgical Oncology recognizes a typical hyperplasia as a possible indication for bilateral prophylactic mastectomy but not systematic [6–8].

CONCLUSION

Atypical ductal hyperplasia is an important predictor of breast cancer development. It is important to know the radiological and histological aspects of the lesions in order to implement early preventive treatment and avoid malignant transformation.

REFERENCES

1. Myers DJ, Walls AL. Atypical Breast Hyperplasia. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2021.
2. Hartmann LC, Degnim AC, Santen RJ, Dupont WD, Ghosh K. Atypical hyperplasia of the breast—risk assessment and management options. *N Engl J Med* 2015;372(1):78–9.
3. Kader T, Hill P, Rakha EA, Campbell IG, Gorringer KL. Atypical ductal hyperplasia: Update on diagnosis, management, and molecular landscape. *Breast Cancer Res* 2018;20(1):39.
4. Johnson D, Pyke CM, Norris DL, Adkins GF. Atypical ductal hyperplasia of the breast in young women: Two case reports. *Asian J Surg* 2003;26(1):37–9.
5. Prasad V, M King J, McLeay W, Raymond W, Cooter RD. Bilateral atypical ductal hyperplasia, an incidental finding in gynaecomastia – case report and literature review. *Breast* 2005;14(4):317–21.
6. Allison KH, Eby PR, Kohr J, DeMartini WB, Lehman CD. Atypical ductal hyperplasia on vacuum-assisted breast biopsy: Suspicion for ductal carcinoma in situ can stratify patients at high risk for upgrade. *Hum Pathol* 2011;42(1):41–50.
7. Bedei L, Falcini F, Sanna PA. Atypical ductal hyperplasia of the breast: The controversial management of a borderline lesion: Experience of 47 cases diagnosed at vacuum-assisted biopsy. *Breast* 2006;15(2):196–202.
8. Rao A, Parker S, Ratzler E, Stephens J, Fenoglio M. Atypical ductal hyperplasia of the breast diagnosed by 11-gauge directional vacuum-assisted biopsy. *Am J Surg* 2002;184(6):534–7.
9. Amitai Y, Menes T, Golan O. Use of breast magnetic resonance imaging in women diagnosed with atypical ductal hyperplasia at core needle biopsy helps select women for surgical excision. *Can Assoc Radiol J* 2018;69(3):240–7.

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Kaoutar Imrani – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Lina Belkouchi – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation

of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Hounayda Jerguigue – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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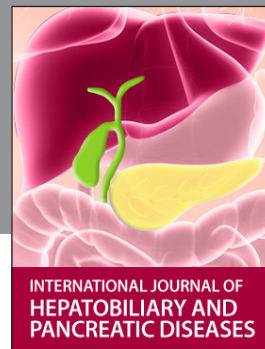
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