Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Anatomopathology

Invasive Ductal Carcinoma in Breast Hamartoma: Case Report and Review if the Literature

Radia Benyahia[1*], Imene. El Hafaia[2], Lamia Benameur[3], Chahira Mazouzi Ouarda Alliche[1], Salah Eddine. Bendib[1]

[1]Medical Imaging Department, Centre Pierre et Marie Curie, University of Algiers 1, Algeria
[2]Medical Anatomopathology Department, CPMC, Algiers 1 University, Algeria
[3]Biophysics Laboratory, Algiers 1 University, Algeria

DOI: 10.36347/sjmcr.2023.v11i11.034 | **Received:** 15.10.2023 | **Accepted:** 21.11.2023 | **Published:** 29.11.2023

***Corresponding author:** Radia Benyahia
Medical Imaging Department, Centre Pierre et Marie Curie, University of Algiers 1, Algeria

Abstract **Case Report**

Hamartoma of the breast is a rare benign lesion composed of a variable quantity of adipose, fibrous and glandular tissue. and rarely transform into malignant lesions. This tumor affects women at any age from puberty. The reported incidence of this anomaly in the literature varies between 0.1 and 0.7% of all benign breast tumors. The radiological and histological aspects are variable and depend on its adipose tissue content. The identification of these lesions makes it possible, on the one hand, to avoid systematic surgical excisions and, on the other hand, will prevent the appearance of breast cancer in these normally benign lesions. In this report, we review the literature and describe a case report of non-specific invasive ductal type infiltrating carcinoma within a Hamartoma in a 48-year-old woman. Mammography, ultrasound and magnetic resonance imaging showed the radiological semiology of a typical Hamartoma with suspicious microcalcifications on mammography. This case illustrates the importance of identifying unusual findings in a typical breast hamartoma during radiological examinations.

Keywords: Breast hamartoma, Invasive ductal carcinoma, mammography, MRI.

INTRODUCTION

Hamartome breast is a rare benign lesion consisting of a variable quantity of adipose, fibrous and glandular tissue touching women at all ages [1, 2]. It is well known that breast hamartomas do not constitute an increased relative risk factor for the development of breast cancer; however, malignant transformation of breast hematomas is possible, given the presence of glandular tissue in this type of lesion [4-6]. In fact, 15 cases of carcinomas associated with breast Hamartoma have already been documented in the literature. [4-14]. In this report, we review the literature and describe a new case of infiltrative carcinoma of non-specific type 2 SBR occurring in a breast Hamartoma that was detected while the patient was being followed for a known Hamartoma.

CASE REPORT

This is a 48-year-old woman with a history of bilateral fibrocystic dystrophy and a right breast hamartoma known for 7 years, discovered outside of a screening mammogram. She presented to her home. gynecologist following self-palpation of induration and increase in the size of the hamartoma. On clinical examination, the mass is hard and mobile, measuring 4 cm, occupying the lower-internal quadrants of the right breast. Mammography reveals a circumscribed, roughly lobulated mass, surrounded by a peripheral halo of clear density. (Figures 1a,1c) compared to the contralateral breast (Figures 1b,1b). The mass contains amorphous, irregular micro calcifications, grouped in clusters (Figures 2). On ultrasound, the mass is very heterogeneous, hypoechoic, surrounded by a fine echogenic pseudo capsule, compatible with a Hamar tome, containing within it microcysts and fine echogenic spots related to microcalcifications. (Figures 3). The radiological examination classifies the mass as BI-RADS 4 of the ACR. The action to be taken was to do a microbiopsy, which came back in favor of an infiltrating carcinoma of non-specific type, HR positive, without Her2 overexpression, Ki 67 at 15%. A breast MRI is requested given the breast density on one side and as part of a loco-regional extension assessment. MRI finds an asymmetry of breast volume at the expense of the right breast, a right breast mass in hyposignal T1 and intermediate T2, in capsule, heterogeneous by the presence of cysts in its breast, but also the presence of a regional non-mass enhancement from to the interior of the mass in relation to the microcalcifications. The lesion

enhanced early producing a hemodynamic curve of the type (Figures 4). A remote extension assessment done, negative income. After the multidisciplinary consultation meeting. The patient underwent a mastectomy, followed by adjuvant chemotherapy. Seventeen months after surgery, there were no signs of local or distant recurrence.

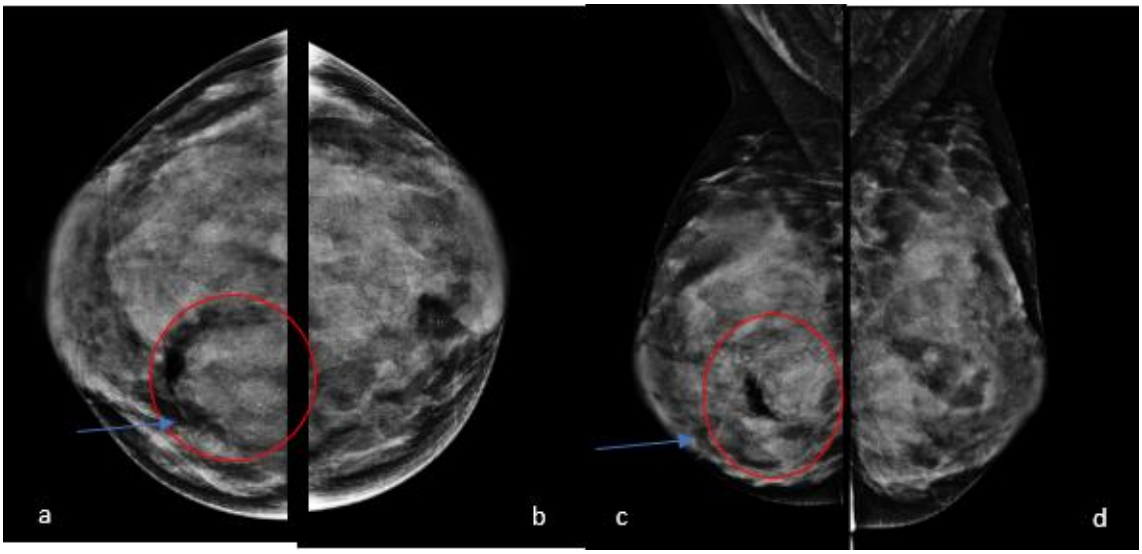

Figure 1 a: Mammography image in oblique view; c: Mammographic image in oblique view: double-component mass, predominantly glandular with a peripheral pseudo-capsule (arrows). b,d: external frontal and oblique view with a normal appearance

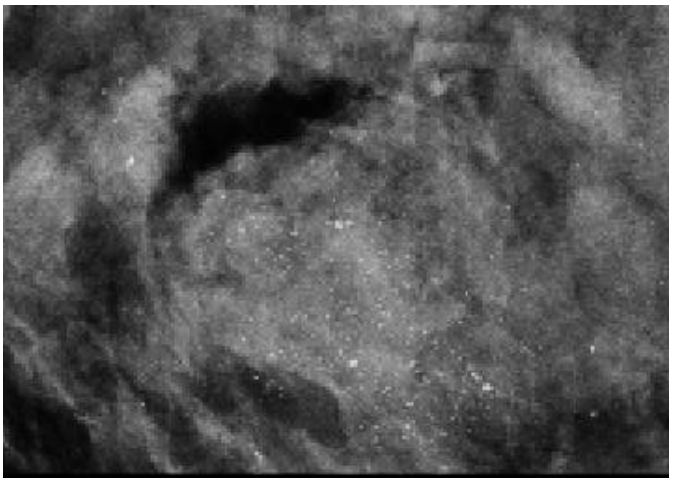

Figure 2: Enlarged mammographic image: Breast microcalcifications, fine, irregular, amorphous, Inside the mass

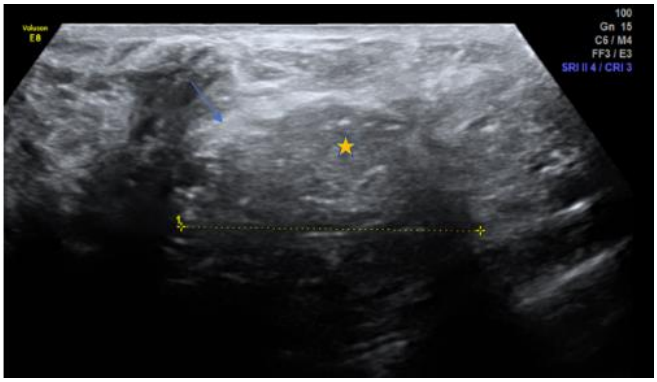

Fig 3: Ultrasound image: large, well-defined heterogeneous hypoechoic mass, surrounded by an echogenic capsule (arrow), containing echogenic spots (star)

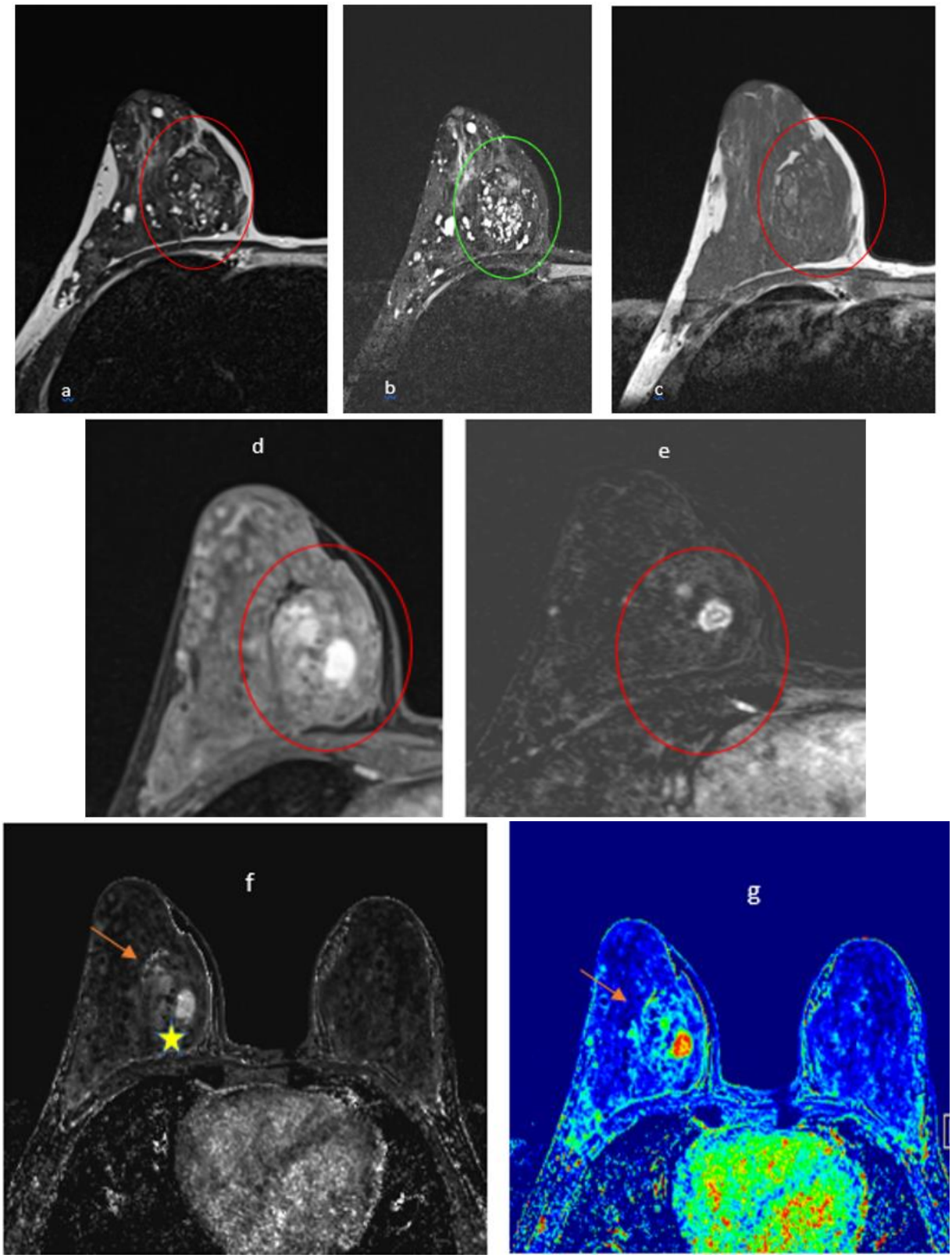

Figure 4. Breast MRI. • a: Axial sequence in T2 weighting: well-limited mass of the right breast in iso signal compared to the rest of the breast containing microcysts within it • b: Axial sequence in FATSAT sequence: well-limited mass of the right breast in heterogeneous hyposignal. • c: T1-weighted axial sequence: well-defined mass of the right breast with heterogeneous hyposignal •d-e: T1-weighted axial sequence after gadolinium injection: subtraction at 30 seconds (d) and at 30 seconds native (e) highlighting an uptake of early and intense contrast of the non-mass enhancement type, • f-g: Axial sequence in ADC, diffusion sequence: well-defined mass (arrow) of the right breast in hypersignal, heterogeneous (star). typical of a malignant tumor

DISCUSSION

Breast hamartomas also called lipofibroadenomas, adenolipofibromas and fibro adenolipomas [3]. Clinically, the lesion is often overlooked on clinical examination because its texture does not differ from that of the surrounding breast tissue. However, a mass gradually increasing in volume, more or less painful can be found, or even a change in consistency in patients with a hamartoma [7]. On the radiological level, Hamartomas are often discovered accidentally during a screening mammogram [3,16]. The typical mammographic feature of hamartomas is a circumscribed conjunction-fat mass [17]. On ultrasound, breast hamartomas have circumscribed contours, oval shape and heterogeneous internal echogenicity [18]. Malignant tumors associated with hamartomas are rare. According to the literature review 15 cases of malignant hamartomas described previously and the current case. Of the 16 cases described, mammography was obtained in 14 cases, 12 of which showed the typical appearance of hamartomas with suspicious features, such as the presence of clusters of microcalcifications, pleomorphic, polymorphic, and suspicious irregular masses. The remaining two cases had the typical appearance of hamartoma without suspicious features. Ultrasound results were only available in six cases, four of which presented masses with suspicious symptoms, hypoechogenicity or a non-parallel orientation within the Hamartomas; and two cases were preoperatively diagnosed as carcinomas by ultrasound-guided fine needle aspiration or micro needle biopsy and underwent one-stage curative surgery [8, 9]. As noted above, the majority of cases had suspicious findings within hamartoma on mammography or ultrasound. Radiologists must therefore be very careful to detect subtle suspicious findings, even though mammography and ultrasound may show typical Hamartomas.

Of the 16 cases described here, 14 had carcinomas confined to the hamartomas and the remaining three cases had carcinomas involving both the hamartomas and adjacent normal breast tissue. However, in the majority of cases described here, including the current case, the carcinomas were located in Hamartomas [4-7, 9-10, 12-14].

CONCLUSION

Breast hamartomas are rare, benign tumors diagnosed by screening mammography. However, carcinomas only occur very rarely. Radiologists must recognize that malignancy can coexist or develop in Hamartomas and be very attentive to the presence of suspicious features in a hamartoma.

REFERENCES

1. Vergine, M., Scipioni, P., Santucci, E., Colangelo, M., Livadoti, G., De Meo, D., ... & Monti, M. (2013). Hamartoma of the breast in a young woman. Case report. *Il Giornale di Chirurgia-Journal of the Italian Surgical Association*, *34*(5), 161-163.
2. Presazzi, A., Di Giulio, G., & Calliada, F. (2015). Breast hamartoma: ultrasound, elastosonographic, and mammographic features. Mini pictorial essay. *Journal of ultrasound*, *18*, 373-377.
3. Stavros, A. T. (2004). *Breast ultrasound. Philadelphia: LWW*, 560-569.
4. Mester, J., Simmons, R. M., Vazquez, M. F. & Rosenblatt R. (2000). In situ and infiltrative ductal carcinoma arising in breast hamartoma. *AJR Am J Roentgenol.* 175 : 64-66.
5. Mendiola, H., Henrik-Nielsen, R., Dyreborg, U., Blichert-Toft, M., & Al-Hariri, J. A. (1982). Lobular Carcinoma in Situ Occurring in Adenolipoma of the Breast: Report of a Case. *Acta Radiologica. Diagnosis*, *23*(5), 503-505.
6. Baron, M., Ladonne, J. M., Gravier, A., Picquenot, J. M., & Berry, M. (2003). Invasive lobular carcinoma in a breast hamartoma. *The Breast Journal*, *9*(3), 246-248.
7. Coyne, J., Hobbs, F.M., Boggis, C. & Harland, R. (1992). Lobular carcinoma in breast hamartoma. *J Clin Pathol.* 45 : 936-937.
8. Kai, M., Tada, K., Tamura, M., Gomi, N., Horii R,….& Akiyama, F. (2009). Breast cancer associated with a mammary hamartoma.*Cancer be you.* [Epub avant impression]
9. Lee, E. H., Wylie, E. J., Bourke, A. G., & De Boer, W. B. (2003). Invasive ductal carcinoma arising in a breast hamartoma: two case reports and a review of the literature. *Clinical radiology*, *58*(1), 80-83.
10. Pervatikar, S. K., Rao, R., Dinesh, U. S., & Parameswaraiah, S. (2009). Large mammary hamartoma with focal invasive ductal carcinoma. *Indian Journal of Pathology and Microbiology*, *52*(2), 249.
11. Ruiz-Tovar, J., Reguero-Callejas, M. E., Aláez, A. B., Ramiro, C., Rojo, R., Collado, M. V., ... & García-Villanueva, A. (2006). Infiltrating ductal carcinoma and ductal carcinoma in situ associated with mammary hamartoma. *The Breast Journal*, *12*(4), 368-370.
12. Tse, G. M. K., Law, B. K. B., Ma, T. K. F., Chan, A. B. W., Pang, L. M., Chu, W. C. W., & Cheung, H. S. (2002). Hamartoma of the breast: a clinicopathological review. *Journal of clinical pathology*, *55*(12), 951-954.
13. Anani, P. A., & Hessler, C. H. (1996). Breast hamartoma with invasive ductal carcinoma report of two cases and review of the literature. *Pathology-Research and Practice*, *192*(12), 1187-1194.
14. Kuroda, N., Sugimoto, T., Numoto, S., & Enzan, H. (2002). Microinvasive lobular carcinoma associated with intraductal spread arising in a mammary hamartoma. *Journal of clinical pathology*, *55*(1), 76-77.
15. Arrigoni, M.G., Dockerty, M.B. & Judd, E. S. (1971). Identification and treatment of breast

hamartoma. *Obstet Gynecological Surgery*. 577-582.

16. Daya, D., Trus, T., D'Souza, T. J., Minuk, T., & Yemen, B. (1995). Hamartoma of the breast, an underrecognized breast lesion: A clinicopathologic and radiographic study of 25 cases. *American journal of clinical pathology*, *103*(6), 685-689.
17. Helvie, M. A., Adler, D. D., Rebner, M., & Oberman, H. A. (1989). Breast hamartomas: variable mammographic appearance. *Radiology*, *170*(2), 417-421.
18. Chao, T. C., Chao, H. H. & Chen, M. F. (2007). Ultrasound characteristics of breast hamartomas. *J Ultrasound Med.* 447-452.