

## Surgical Scar Breast Carcinoma: A Rare Entity

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### ABSTRACT

Breast carcinoma is common having many predisposing and genetic causes, however, breast carcinoma of surgical scar is very rare entity. Carcinomatous changes can occur at the site of burns scar, chronic ulcers, fistulous tracts, chronic infections and surgical scars. Here we report the case of 44 years old female patient who underwent surgical excision of Fibroadenoma of left breast and developed mass at the site of previous surgical scar 7 years later, which proved to be carcinoma on radiological imaging and biopsy reports.

**Key Words:** Breast carcinoma, Scar carcinoma, Surgical scar carcinoma

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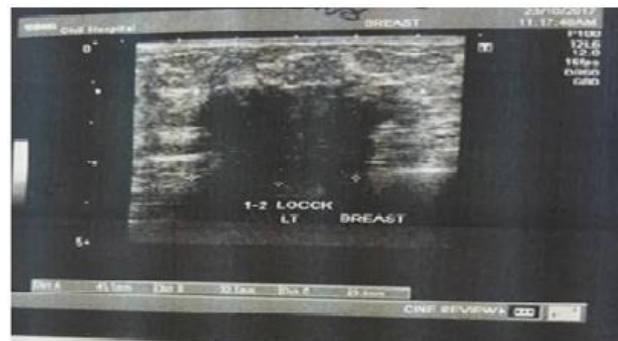
### Introduction

Breast cancer is the most common female malignancy and most common cause of death in women aged 40-50 years.<sup>1</sup> Chronic inflammation, surgical scars and burns can give rise to cancer, however very few cases have been reported where malignancy arises from surgical scars.<sup>2</sup> Traumatic tissue behaves as an oncogene, and scar tissue as functional layer plays major role in development of carcinoma.<sup>3</sup> The unstable scar tissues cannot withstand against tumefactive particle and can undergo carcinomatous changes.<sup>4</sup> We report a rare case of breast carcinoma developing on previous surgical scar of benign etiology.

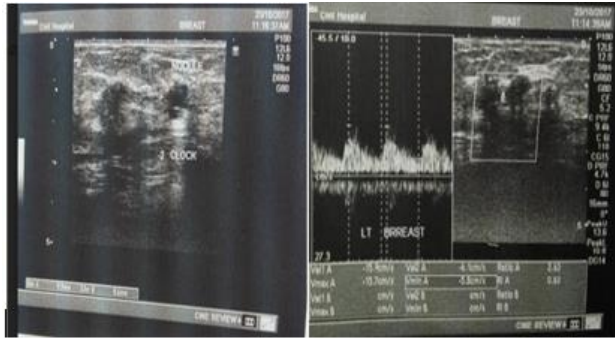
### Case Reports

A 44-year-old female presented to radiology department Civil Hospital Karachi for mammography. She had a complaint of palpable mass in left breast in upper outer quadrant for three months. Mass was firm in consistency, non-movable and about 3-4cm in size. It was not adherent to overlying skin, not associated with pain. Overlying skin was normal, no redness or discharge was present. Patient

had history of excision of Fibroadenoma at the same site seven years back. She was afebrile and family history of breast carcinoma was negative. Mammography showed heterogeneously dense parenchyma, which reduced the sensitivity of mammogram. Ultrasound breast was done which showed an irregular spiculated hypoechoic mass with posterior acoustic shadowing at 1-2 o'clock position (previous site of surgery) with positive color doppler flow along with adjacent satellite nodule (Figure 1a, 1b).

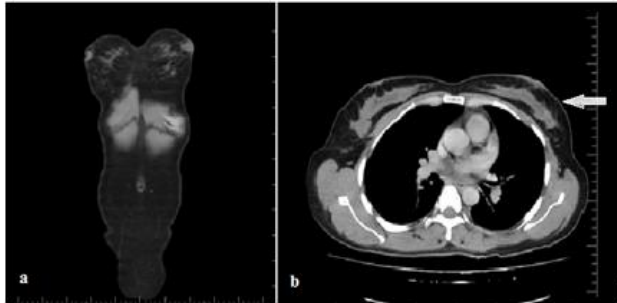


**Figure 1a: Ultrasound left breast showing an irregular spiculated hypoechoic mass with posterior acoustic shadowing at 1-2 o'clock position**



**Figure 1b: Satellite nodule with positive color Doppler flow.**

On the basis of ultrasound, BIRADS V was given and biopsy was done which proved to be carcinoma. Contrast enhanced CT scan (CECT) chest and abdomen were advised for metastatic workup which came out to be negative, and did not show any visible significant mass (Figure 2).



**Figure 2: Coronal and axial images of CECT showing no mass lesion in left breast (arrow).**

## Discussion

Chronic ulcers, fistulous tracts, surgical scars and burn scar can give rise to dysplasia and carcinoma.<sup>3</sup> Trauma and scar tissue play a vital role in malignant transformation. Several criteria are proposed by Freund et al for surgical scar breast cancer identification: 1) Previous history of surgery at the site of carcinoma 2) Normal breast before surgery 3) Healed surgical scar 4) Similarity between surgical scar and tumor site and 5) Appropriate time between tumor and previous surgery.<sup>2</sup> Scar tissue heal slowly because of low vascularity and is

more prone to infections. It undergoes continuous reparative process and has no lymphatics so that it can undergo dysplasia but can grow in isolation.<sup>4,5</sup> Ultrasound is useful in detecting small breast cancers and is useful in women with dense breasts where mammography has low sensitivity,<sup>6</sup> (as in our case where mass was very clear on ultrasound however mammography and CECT did not show any significant mass). Ultrasound characteristics of malignant mass include an irregular shape hypoechoic mass with indistinct margins, taller than wider, and posterior acoustic shadowing.<sup>7</sup>

## Conclusion

Scar carcinoma of breast is rare form of carcinoma seen at the site of previous surgery. Thin scar tissue, low vascularity of scar, increased susceptibility to infection in scar tissue and instability of scar tissue to withstand carcinogens, increases the chances of carcinoma at the surgical site. Rarity of the disease enabled us to report this case

## References

1. Mcpherson K, SteelC, and DixonJ. Breast cancer-epidemiology, risk factors, and genetics. *BMJ* 2000; 321(7261): 624–28.
2. Kim M, Kim E, Lee J, Youk J, Park B, Kim H, Oh K, Breast Cancer from the Excisional Scar of a Benign Mass. *Korean J Radiol.* 2007; 8(3): 254–57.
3. Freund H, Biran S, Laufer N, Eyal Z. Breast Cancer arising in surgical scar. *J surg oncol* 1976; 8(6):477-80.
4. Saaq M, Ashraf B. Marjolin's ulcers in the post-burned lesions and scars. *World J Clin Cases* 2014; 2(10): 507–14.
5. Bowers RF Young JM. Carcinoma arising in scars, osteomyelitis, and fistulae. *Arch surg.* 1960; 80(4):564-70.
6. Gokhale S. Ultrasound characterization of breast masses. *Ind J Radiol.* 2009; 19(3): 242–47.
7. Raza S, Goldkamp A, Chikarmane S, Birdwell R. US of Breast Masses Categorized as BI-RADS 3, 4, and 5: Pictorial Review of Factors Influencing Clinical Management. *Radiographics.* 2010;30(5):1 199-213.