International Journal of Medical and Health Research
www.medicalsciencejournal.com
ISSN: 2454-9142
Received: 30-07-2021, Accepted: 15-08-2021, Published: 31-08-2021
Volume 7, Issue 8, 2021, Page No. 66-67

Metaplastic carcinoma of the breast: A rare entity

Sudarshan Kumar Sharma[1], Aarti Dhatwalia[2*], Anchana Gulati[3]
[1] Professor and Head, Department of Pathology, IGMC Shimla, Himachal Pradesh, India
[2] Medical officer specialist, CMO Office Shimla, Himachal Pradesh, India
[3] Associate Professor, Department of Pathology, IGMC Shimla, Himachal Pradesh, India

Abstract
Meta plastic carcinoma breast is a very rare neoplasm and represents only 0.1% of all mammary malignancies. It represents a rare heterogeneous malignant tumor, comprising of glandular and nonglandular patterns with epithelial and/or mesenchymal tissues. Patients with MCB are most commonly found to be older, with tumors of larger size and more advanced stage, usually tested triple negative. Here we describe a female patient with metaplastic carcinoma left breast.

Keywords: metaplastic carcinoma, breast, rare, entity

Introduction
Metaplastic carcinoma of breast (MCB) represents a rare heterogeneous malignant tumor, comprising of glandular and nonglandular patterns with epithelial and/or mesenchymal tissues [1]. It is a very rare neoplasm and represents only 0.1% of all mammary malignancies [2]. The exact cell of the origin of carcinosarcoma (CS) is not known, but it is believed to be sarcomatoid metaplasia of carcinoma cells [3]. The histologic classification of metaplastic carcinoma is primarily based on the morphologic findings of tumor cell types: purely epithelial (squamous, adenosquamous and spindle cell carcinomas) or mixed epithelial and mesenchymal (carcinoma with chondroid/osseous metaplasia and carcinosarcoma) components [4]. Compared to the patients with infiltrating duct carcinoma (IDC), patients with MCB have worse outcomes in 5-year survival rates, ranging from 49% to 68% [5].

Case Report
A 55 years old female presented with a lump in her left breast in the surgery opd in the year 2019. CECT chest showed a peripherally enhancing, centrally necrotic mass lesion in the left breast. Biopsy from the lesion was taken in the year 2019 which was reported as carcinosarcoma left breast. Toilet mastectomy of left breast was done in the surgery department and specimen along with left axillary tail was sent for histopathological examination in the Pathology department IGMC, Shimla in January 2020. On gross examination, specimen measured (19x13x7) cms with overlying skin measuring (13x12) cms. Areola with adjacent skin showed ulceration of (2.5x1.5) cms. On serial section, retro areolar region showed a firm variegated growth (7x5.8x3.2) cms showing grey white to grey brown to tan brown to necrotic areas (Figure 1). Axillary tail measured (5x3) cms. On palpation, 9 lymph nodes identified ranging from 3mm to 1.5cm in diameter. Histological examination of growth showed sheets and clusters of tumor cells with extensive squamous and spindle Meta plastic changes. Diagnosis of Meta plastic carcinoma left breast with components: squamous cell carcinoma (Figure2) and spindle cell carcinoma (Figure3) was given. Nine lymph nodes dissected out of specimen were free from metastatic tumor deposits.

Discussion
MCB is a very rare form of breast tumor and its incidence is <1% of all breast malignancies [6]. Patients with MCB are most commonly found to be older, with tumors of larger size and more advanced stage and usually tested triple negative [7]. The histological classification of MCB was primarily based on the morphologic findings of tumor cell types: purely epithelial (squamous, adenosquamous and spindle cell carcinomas) or mixed epithelial and me senchymal (carcinoma with chondroid/osseous metaplasia and carcinosarcoma) components [8]. The World Health Organization classifies MCB into an epithelial type and a mixed type with further classification into 5 additional subtypes [9]. The renowned Wargotz and Norris classification, as described in their 1989–1990 studies, differentiates MCB into 5 subtypes: spindle cell, squamous cell, matrix-producing, carcinosarcoma, and MCB with osteoclastic giant cells [10]. The presence of certain metaplastic elements has been associated with varying prognosis. For example, the presence of high-grade spindled or pleomorphic components is associated with aggressive behaviour such as metastases with a worse prognosis [11]. where as the low-grade, fibromatosis-like metaplastic carcinomas (FLMC) with bland spindled cells have a high risk of local recurrence but minimal risk of metastatic spread [12].

Conclusion
Metaplastic carcinoma of breast represents only 0.1% of all mammary malignancies. it is believed to be sarcomatoid metaplasia of carcinoma cells. The World Health Organization classifies MCB into an epithelial type and a mixed type with further classification into 5 additional subtypes. Patients with MCB are most commonly found to be older, with tumors of larger size and more advanced stage. Compared to the patients with infiltrating duct carcinoma (IDC), patients with MCB have worse outcomes in 5-year survival rates, ranging from 49% to 68%.

Fig 1: Gross examination showing grey white to grey brown to tan brown and necrotic areas.

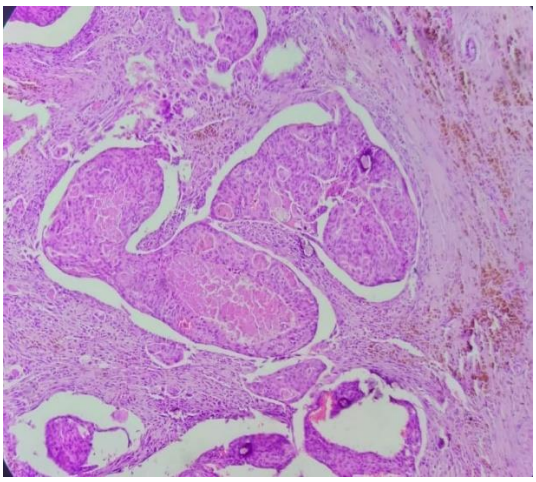

Fig 2: Microscopic examination showing squamous cell carcinoma component.

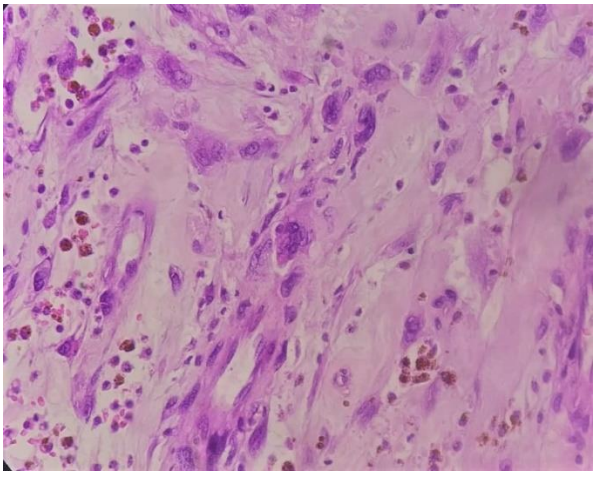

Fig 3: Microscopic examination showing spindle cell carcinoma component.

References

1. Hasdemir OA, Tokgöz S, Köybaşıoğlu F, Karabacak H, Yücesoy C, İmamoğlu Gİ. Clinicopathological features of metaplastic breast carcinoma. Adv Clin Exp Med,2018:27:509-13.
2. Khan HN, Wyjd L, Dunne B *et al*. Spindle cell carcinoma of the breast: a case series of a rare histological subtype. Eur J Surg Oncol,2003:29:600-3.
3. Ilhan E, Vardar E, Ozkok G, Sezgin A, Sahin S, Teker K, *et al.* A rare tumour of the breast: Carcinosarcoma. J Clin Med Res,2010:2:96-8.
4. Reis-Filho JS, Lakhani SR, Gobbi H, Sneige N. Metaplastic carcinomas. In: Lakhani SR, Ellis IO, Schnitt SJ, Tan PH, van de Vijver MJ, eds. WHO Classification of Tumours of the Breast. Lyon, France: IARC Press,2012:48-52.
5. Lai HW, Tseng LM, Chang TW *et al*. The prognostic significance of metaplastic carcinoma of the breast (MCB)—a case controlled comparison study with infiltrating ductal carcinoma. Breast,2013:22(5):968-973.
6. Beatty JD, Atwood M, Tickman R, Reiner M. Metaplastic breast cancer: clinical significance. Am J Surg,2006:191:657-664.
7. Lai HW, Tseng LM, Chang TW, Kuo YL, Hsieh CM, Chen St *et al*. The prognostic significance of Meta plastic carcinoma of the breast (MCB)-a case controlled comparison study with infiltrating ductal carcinoma. Breast,2013:22:968-973.
8. Cimino-Mathews A, Verma S, Figueroa-Magalhaes MC, Jeter SC, Zhang Z, Argani P *et al*. A clinicopathologic analysis of 45 patients with metaplastic breast carcinoma. Am J Clin Pathol,2016:145:365-372.
9. Luini A, Aguilar M, Gatti G *et al*. Metaplastic carcinoma of the breast, an unusual disease with worse prognosis: the experience of the European Institute of Oncology and review of the literature. Breast Cancer Res Treat,2007:101(3):349-353.
10. Shah DR, Tseng WH, Martinez SR. Treatment options for metaplastic breast cancer. ISRN Oncol,2012:70:61-62.
11. Carter MR, Hornick JL, Lester S, Fletcher CD. Spindle cell (sarcomatoid) carcinoma of the breast: a clinicopathologic and immunohistochemical analysis of 29 cases. Am J Surg Pathol,2006:30:300-309.
12. Nonnis R, Paliogiannis P, Giangrande D, Marras V, Trignano M. Low-grade fibromatosis-like spindle cell metaplastic carcinoma of the breast: a case report and literature review. Clin Breast Cancer,2012:12:147-150.