

Carcinosarcoma of the Breast: A Rare Identity**Susanta Kumar Das^{1*}, Anadi Nath Acharya², Debashis Bhattacharya³**¹Assistant Professor, Dept. Of General Surgery, Burdwan Medical College and Hospital, Burdwan, West Bengal, India²Professor, Dept. of General Surgery, R.G.Kar Medical College, Kolkata, West Bengal, India³Professor, Dept. of General Surgery, North Bengal Medical College and Hospital, India***Corresponding author***Susanta Kumar Das***Article History***Received: 30.04.2018**Accepted: 09.05.2018**Published:30.05.2018***DOI:**

10.36347/sjmcr.2018.v06i05.009



Abstract: Carcinosarcoma of the breast is a rare malignant tumour of the breast. A 50 years old lady presented with complaints of a lump in the right breast for two months duration after a minor trauma. Initial fine needle aspiration examination revealed it to be a fibrolipoma. Radiological investigations were suggestive of a benign lesion. An excision biopsy with a wide margin was done. The HPE revealed it to be a well circumscribed carcinosarcoma of the left breast. Subsequently a modified radical mastectomy was performed and she was advised to follow up in the radiotherapy department for adjuvant therapy.

Keywords: Carcinosarcoma breast.

INTRODUCTION

Primary sarcomas of the breast are rare and constitute 0.6 to 1.2% of the total number of malignant tumours of the breast [1]. Carcinosarcoma, as defined by the World Health Organization, is a tumour composed of intimately admixed malignant epithelial and stromal components [2]. True carcinoma is rare and aggressive. This tumour should be differentiated from other metaplastic carcinomas, including spindle cell carcinoma, malignant phyllodes tumour and stromal sarcoma. We report here our experience with a case of carcinosarcoma of the breast, describing the gross and the microscopic findings.

CASE REPORT

Fifty years old, premenopausal housewife presented to the outpatients' department with a lump in the left breast of two months duration after a history of minimal trauma. The lump was initially and gradually increasing in size. Her obstetric history was non-contributory. On physical examination there was an irregularly shaped 4x 4 cm mass in the upper outer quadrant of the left breast with even surface and well defined margins. There was good mobility with no adhesion to the skin or the pectoral muscle. There were no clinically palpable lymph nodes in the axilla. A probable diagnosis of fibroadenoma was considered, keeping in mind and also the possibility of a well circumscribed carcinoma or a fat necrosis. The FNAC suggested a fibrolipoma. Mammography showed a dense opacity without any spiculation or micro

calcification corresponding to the lump. An excision biopsy with a wide margin was done under general anaesthesia.

Macroscopically the cut surface of the tumour was 4x3.5 cm in size, elastic and soft in consistency with a greyish white surface and solid and lobulated features. The tissue was then fixed with 10% formalin and paraffin section were prepared and stained with eosin and haematoxylin.

Microscopically the tumour had both intermingled carcinomatous and sarcomatous areas with the invasive carcinomatous areas extending into the sarcomatous structures [Fig. 1, 2]. However the tumour was well circumscribed with negative margins.

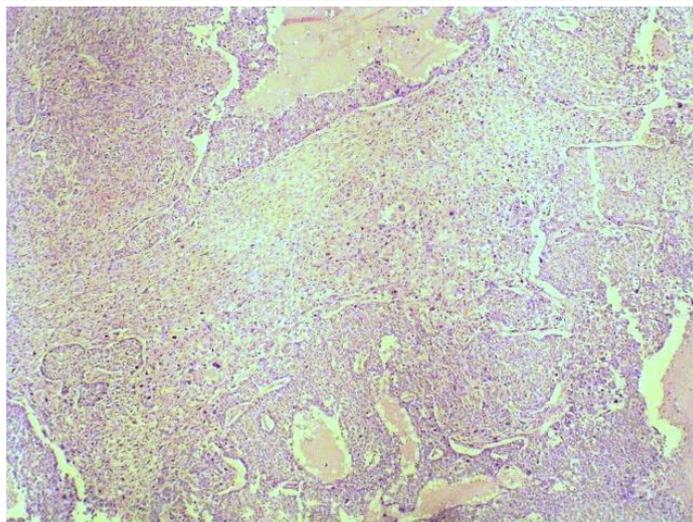


Fig-1: HPE of carcinosarcoma of the breast (low power field)

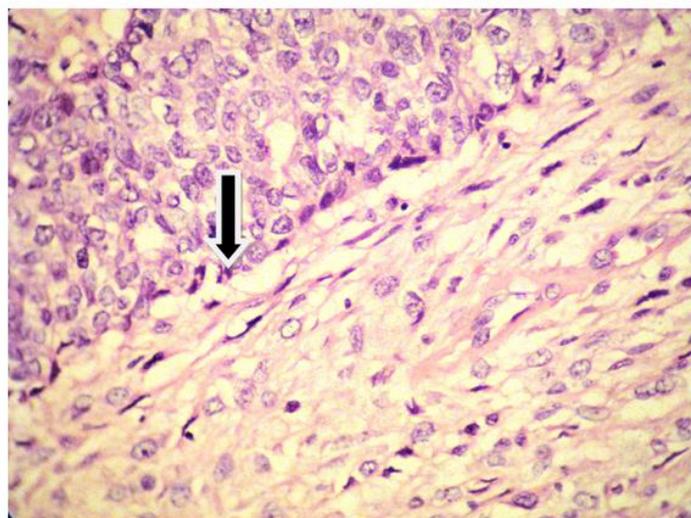


Fig -2: The high power field view showing the transition zone between the carcinomatous and the sarcomatous areas

The patient was offered for completion modified radical mastectomy. She underwent a modified radical mastectomy of the left side. She had an uneventful postoperative period and was discharged to follow up in the radiation therapy department.

The final histopathology revealed no residual tumour tissue in the completion mastectomy specimen with two out of seventeen lymph nodes being positive for metastasis in the axillary dissection specimen.

DISCUSSION

The incidence of true carcinosarcoma of the breast has been reported as to be 0.1 to 0.2% of breast carcinomas [3, 4]. The strict definition of this tumour requires both a carcinomatous component and a malignant non-epithelial component of mesenchymal origin without evidence of a transition zone between the two elements [5, 6].

The cell of origin of this tumour is still debated. It is a form of metaplastic mammary carcinoma and is probably derived of myoepithelial cells [5, 7]. The term carcinosarcoma is used where the sarcoma component resembles fibrosarcoma, malignant fibrous histiocytoma, chondrosarcoma, osteogenic sarcoma, rhabdomyosarcoma, angiosarcoma or a combination of these various patterns, and when present with a carcinomatous component which usually is the ductal type of carcinoma [8]. However the term carcinosarcoma has not been implied consistently in the literature. Some use it for only those biphasic tumours where at least 50% of the tumour is composed of malignant appearing spindle cell component with carcinoma component being contiguous admixed with sarcomatous component. The stroma by definition has to appear sarcomatous. Other authors maintain the term carcinosarcoma to those neoplasms which are composed of epithelial and mesenchymal cancers without evidence of transition zone between the two [8].

Carcinosarcoma of the breast needs to be differentiated from the metaplastic carcinoma. The most important finding to differentiate is whether a transition zone exists [5, 6]. Carcinoma of the breast can undergo spindle cell and other metaplasia. Although these metaplastic and infiltrative cancer cells form a pseudo-sarcomatous stroma, as if carcinomatous components are admixed with sarcomatous components, a transition zone is always seen between these two components [9]. Five year survival rate of carcinosarcoma is 49% as compared to 64% in cases of spindle cell tumours, so these tumours should be distinguishable other than by the difference in their prognosis [5].

Carcinosarcoma usually presents as a large mass, are often painful and show no preference to any particular age group [6]. They metastasize via the lymphatics and the blood stream. They also tend to recur locally because neoplastic cells often tend to extend within the perivascular tissue beyond the capsule of the tumour [3].

The strategy of the treatment in carcinosarcoma is similar to those for any breast cancer. Literature review shows most cases being treated with mastectomy with or without axillary dissection [3-6]. In about 26% patients there is involvement of the axillary lymph nodes as reported by Wargotz and Norris [5] and hence axillary dissection is a must in these cases. Postoperative adjuvant radiotherapy and hormone therapy have no defined place in the treatment of sarcomas, however they are probably useful in carcinosarcoma because of their epithelial component [1]. The place of chemotherapy is not known because of the small number of cases. Although our case had not showed any oestrogen or progesterone receptor, there are cases where they were present [10].

The prognosis of carcinosarcoma is poor with survival in months. The prognosis undoubtedly depends on the extent of the tumour and the degree of cellular differentiation. It is also claimed that increased number of mitosis per field has a poor prognosis [11]. Pleural and pulmonary metastasis is more common than the skeletal liver and the brain metastasis. Any distant metastasis is ominous for patients, because of the fatal potential, but local recurrence is as threatening and can generally be treated surgically [5, 9].

REFERENCES

1. Gogas JG, Kotsianos G, Gogas KG. Sarcoma of the breast. *The American Surgeon*. 1976 Nov;42(11):812-6.
2. Wick MR, Swanson PE. Carcinosarcomas: current perspectives and an historical review of nosological concepts. In *Seminars in diagnostic pathology* 1993 May (Vol. 10, No. 2, pp. 118-127).

3. Borton B, Sieunnarine K. Carcinosarcoma: A rare tumour of the breast. *Aust NZJ Surg*. 1990; 60: 917-19.
4. Kristi M Esses, Ramona M Hagmaier, Susan A Blanchard, John J Lazarchick, Adam I Riker. Carcinosarcoma of the breast; report of two cases. *Eur J Gynaec Oncol*. 2002; 24: 93-95.
5. Wargotz ES, Norris HJ. Metaplastic carcinomas of the breast III; Carcinosarcoma. *Cancer* 64:1490-1499.
6. Harris M, Persaud V. Carcinosarcoma of the breast. *J Pathol*. 1974; 112: 99-105.
7. JG, Azzopardi. *Problems in breast pathology*. WB Saunders; 197: 373-78.
8. Lt Col V Srinivas, Lt Col MM Harjai, Air Cmde H Subramanya, Brig T Rajaram, Lt Gen Ramji Rai. Carcinosarcoma of the breast with an unusual secretory carcinoma as the carcinomatous component. *MJAFI*. 2004;60: 410-12.
9. Nahomi Tokudome, Goi Sakamoto, Takehiko Sakai, Syuhei Sarumaru, Naoko Okuyama, Fumiko Hori, etal. A case of carcinosarcoma of the breast. *Breast Cancer*. 2005; 12: 149-53.
10. Ding H, Gao L, Jin H. Sarcomatoid carcinoma of the breast. *Zhonghua Bing LiXue Za Zhi*. 2000; 40: 1577-85.
11. Barnes L, Pietruszka M. Sarcomas of the breast: a clinicopathological analysis of ten cases. *Cancer*, 1977; 40: 1577-85.
12. Hanks G, Cherny NI, Christakis NA, Kaasa S. *Oxford textbook of palliative medicine*. Oxford university press; 2011.
13. Eisenach KD, Sifford MD, Cave MD, Bates JH, Crawford JT. Detection of Mycobacterium tuberculosis in sputum samples using a polymerase chain reaction. *American Review of Respiratory Disease*. 1991; 144(5):1160-1163.