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Case Report of Primary Sarcoma of Breast with Osseous Metaplasia

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Abstract: ***Breast sarcomas are very uncommon and make up less than 1 % of all primary breast malignancies. Primary osteosarcoma accounts for about 12.5 % of all breast sarcomas. Here I would like to present a 70 year old female presented with complaint of swelling in the left breast since two and half months which is insidious in onset, gradually progressive and attained present size. USG bilateral breast and axilla-F/s/o BIRADS IV lesion in left breast. Trucut biopsy-studied sections showed pleomorphic cells with hyperchromatic nuclei and prominent nucleoli.***

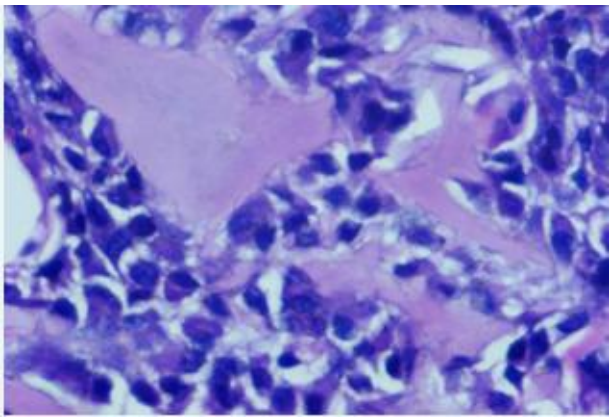
Keywords: Primary Sarcoma, Breast, Osseous Metaplasia

1. Introduction

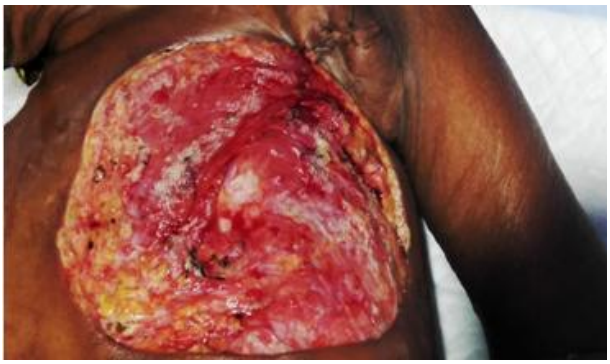
The histogenesis of primary osteosarcoma of the breast is unknown, prognosis and optimal treatment remain uncertain because of the rarity of this tumour. The histogenesis of primary osteosarcoma of the breast is not clear, but an origin from totipotent mesenchymal cells of the breast stroma or a transformation from a pre-existing fibroadenoma or phyllodes tumour has been suggested. Primary breast osteosarcomas are considered highly aggressive tumours associated with early recurrence and a propensity for hematogenous rather than lymphatic spread, most commonly to the lungs. Extra skeletal forms of osteosarcoma have been reported in other organs like thyroid, kidney, bladder, colon, heart, testes, penis, gall bladder and the cerebellum. Although primary osteosarcoma of bone is common in the young, primary osteosarcoma of the breast is seen in an older age group with a mean age of 65 years. Around 150 cases were reported in literature until now.

2. Case Report

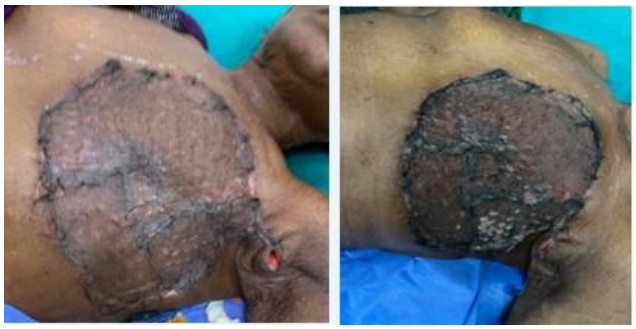
A 70 year old female came with complaints of lump in the left breast since 2 and half months noticed while taking bath, initially small in size and later rapidly progressive involving entire left breast and pain over the swelling since 8 days, pricking type, diffuse, non-radiating and loss of appetite since 10 days. On local examination, swelling of size 20x15 cm present. Skin stretched and shiny, dilated vessels present, warmth present, tenderness present, firm in consistency, mobile along the breast tissue. Nipple areola complex is normal, no axillary lymph nodes. Opposite breast is normal. Clinically patient was diagnosed to have phyllode tumour of left breast. Trucut biopsy showed pleomorphic cells with hyperchromatic nuclei and prominent nucleoli. Area shows osseous metaplasia and osteoclastic type of giant cells.



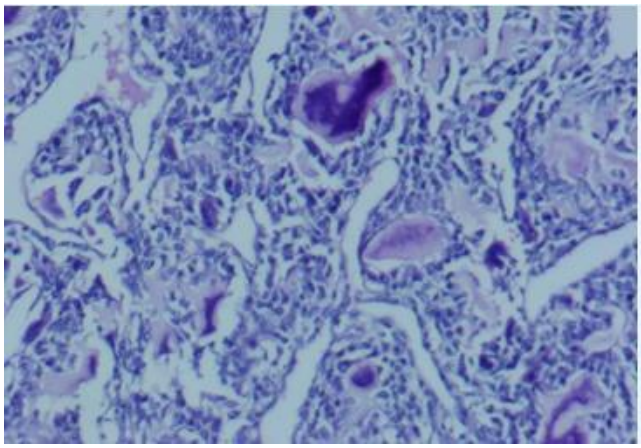
High power view showing tumour cells with osseous metaplasia



Showing specimen of left breast



After split skin grafting on POD 3 and 5



Shows tumour cells, osseous metaplasia and osteoclastic giant cells

3. Discussion

Primary osteosarcomas of the breast are extremely rare. Primary osteosarcoma should be diagnosed only after metaplastic mammary carcinoma is ruled out. Breast osteosarcomas are highly malignant. It spreads mainly by the hematogenous route and axillary nodes are rarely involved. Osteosarcoma is classified into many subtypes; the commonest are fibroblastic, osteoblastic, and osteoclastic osteogenic sarcomas. Tumor response to adjuvant chemotherapy is unclear and simple mastectomy as the treatment of choice. Fine-needle aspiration specimens of primary osteosarcoma of the breast may show pleomorphic spindle cells, osteoclast- like giant cells, patterns and plaques of osteoid; however, similar cytologic may be seen in sarcomatoidcarcinoma

4. Conclusion

Although sarcomas of the breast usually appear to be associated with a better prognosis than conventional breast carcinomas of the same size, reports on the prognosis of patients with osteogenic sarcomas of the breast ingeneral indicate a poor outcome. Exceptions to this generally aggressive behaviour do occur, based on the reports of long-term survivals among some of these patients.The5-year survival rate of primary breast osteosarcoma was 38%, and metastases developed in 42% of cases, most commonly to the lung.

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