CASE REPORT

Angiosarcoma of Breast - a Rarity

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Abstract

Angiosarcoma of the breast is a rare tumor accounting for one in 1700- 2300 cases of primary breast cancer in Asian women. It carries a poor prognosis as it has a propensity to metastasize hematogenously. Hence early detection and treatment can improve the prognosis. We report a rare case of primary angiosarcoma of the breast and review the literature

Key Words

Angiosarcoma, Breast, Metastasis

Introduction

Angiosarcoma of the breast was first reported by Schmidt in 1887 (1). It accounts for 0.04% of primary mammary tumors (2) . In Asian women it has a frequency of one in 1700-2300 cases (3). Histologically it is composed of anatomizing vascular channels lined by atypical endothelial cells. Owing to its propensity to metastasize hematogenously, it carries a very poor prognosis (4,5).We report a rare primary case of localized angiosarcoma of breast.

Case Report

40years old female presented with a lump in the right breast of three month duration. Lump on examination was hard but mobile. It measured approximately 5 x 4cms in the lower outer quadrant. Skin over the lump was free .There were no signs of inflammation. No evidence of lymphadenopathy on examination (clinically T2N0). FNAC of the lump was suggestive of carcinoma of breast. After metastatic evaluation patient was subjected to mastectomy with axillary lymphadenectomy (Level1 and Level 2). Post operatively patient recovered well and was discharged 3rd post op day. Histopathology was suggestive of low grade angiosarcoma of breast with negative surgical margins. Low power view of the tumor revealed vascular channels lined by cuboidal tumor cells (Figure 1) and high power view showed tumor cells with moderate degree of pleomorphism. There was no evidence of mitotic figures within the tumor. Three months follow-up did not reveal either a local recurrence or distant metastasis.

Discussion

Angio sarcoma of the breast is rare and accounts for 0.04% of primary mammary cancers and accounts for 8% of all mammary sarcomas6 . Angiosarcoma of breast usually occurs primarily as was in our case. However it can also occur following radiotherapy for CA breast (7).

The histological features of angiosarcoma of the breast are classified into three groups (8). Group I angiosarcoma shows dilated, sinusoid-like vessels (lined by a single layer of flat endothelial cells) surrounding a duct in the breast. Mitotic figures are not present. Group II shows numerous small buds or tufts of endothelial cells projecting into the vascular lumen and papillary growth of endothelial cells. Group III shows a focus of growth of spindle and polygonal cells. Necrosis is present only in Group III tumors. The

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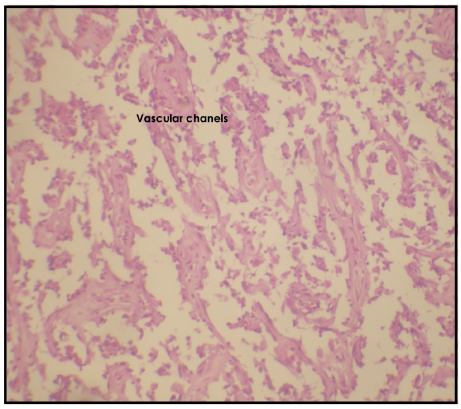

Fig 1. Low Power view of the Tumor Showing Vascular Channels Lined by Cuboidal Tumor Cells

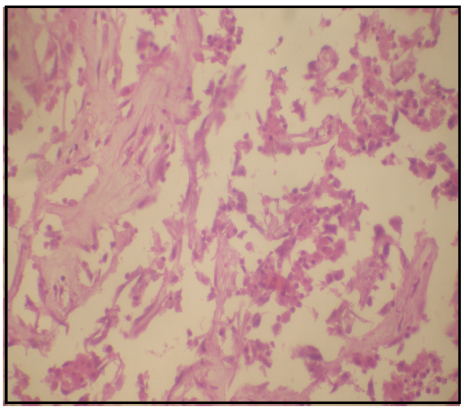

Fig 2. High Power view Showing the Tumor cells Depicting Moderate Degree of Pleomorphism

resected specimen from our patient's mammary tumor demonstrated histological features of group I variety (*Fig 1*(Low power view) and *Fig 2* (high power view).

This tumor needs to be differentiated from the other tumors like stromal sarcoma, squamous cell carcinoma with sarcomatoid features, fibrosarcoma etc. This can be achieved by Immunostaining for factor VIII related antigen, CD 31, CD34, desmin, and vimentin (9). In our case the histological picture was classical of the angiosarcoma hence ,we did not proceed for the immunohistology.

Disparity between the FNAC and definitive pathology has been reported in the literature (10). Similar was our experience wherein the FNAC had been carcinoma of breast but the definitive histopathology turned out to be angiosarcoma of breast.

The relapse rate has been related to the histological differentiation. Higher mitotic figures tend to have higher relapse rate. In one series of 19 patients with primary mammary angiosarcoma no relapse was noted in group i however those with histological features of group iii 57% relapsed (4 out of seven) (11). This is in accordance with our observation too. Our patient had histological features consistent with group i and had not relapsed at three months of follow up.

Conclusion

In conclusion angiosarcoma of breast is a rare mammary tumor which if detected and treated in time carries a reasonable prognosis.

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