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Case Report

Adenoid cystic carcinoma right breast: a rare case report

Shruthikamal V., Reshma S.*, Rajesh S.

Department of General Surgery, Saveetha Medical College and Hospital, Thandalam, Chennai, Tamil Nadu, India

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***Correspondence:**
Dr. Reshma S.,
E-mail: surgeonreshma@gmail.com

ABSTRACT

Adenoid Cystic carcinoma of the breast is a rare neoplasm accounting for 0.1% of breast carcinomas, and presenting most commonly as a painful breast lump. In contrast to the aggressive nature of adenoid cystic carcinoma at other sites, adenoid cystic carcinoma of the breast has a favourable prognosis, lymph node involvement or distant metastases seldom occur. Treatment is basically of modified radical mastectomy. Chemotherapy, radio therapy and hormonal treatment have been infrequently used. We report a case of 60 years old woman with adenoid cystic carcinoma of the right breast managed with MRM.

Keywords: Adenoid cystic carcinoma, Axillary lymph node, Invasive cribriform carcinoma pattern, Modified radical mastectomy, Mammograph, Tru-cut biopsy

INTRODUCTION

Adenoid cystic carcinoma of the breast is a rare cancer variant. Adenoid cystic carcinoma can occur between 30 and 90 years of age. It is more common in women in the fifth and sixth decade of life.[1] Patients present with a breast lump, which is tender to palpation. Histologically, Adenoid cystic carcinoma has a unique distinctive biphasic pattern that consists of true laminate and pseudo-cystic spaces, true glands are lined by epithelial cells and pseudocysts are lined by myoepithelial cells.

Cytologically, the tumor shows a typical pattern, globules of mucous surrounded by epithelial cells with little cytoplasm and small hyperchromatic nuclei. It has a better prognosis than most forms of breast cancer and the incidence of axillary lymph node metastases is less.[2] Distant metastases are uncommon, however when they occur they tend to do so without prior lymphnode involvement. We present a rare case of Adenoid cystic carcinoma of right breast in a woman treated with modified radical mastectomy.

CASE REPORT

A 60-year-old woman presented to the Outpatient Department with lump in the right breast for seven months duration. On examination tender, freely mobile measuring 6×5 cm, irregular with varying consistency was palpable at upper outer quadrant of her right breast. The skin of both breasts was normal. Axilla-supraclavicular fossa were free. Mammography of right breast revealed an irregular, hyper-dense, multiloculated cystic mass lesion, occupying whole of the upper outer quadrant measuring 6×5 cm with irregular speculated margins, with no calcification, suggestive of a neoplastic lesion. All routine blood investigations and chest X-ray were within normal limits. Ultrasound abdomen showed normal study. FNAC of right breast lump revealed paucicellular smears with few clusters of atypical duct epithelial cells with scattered lymphocytes in the background, suspicious of malignancy. Tru- cut biopsy of right breast lump revealed fragments with neoplasm composed of cells arranged in cribriform and reticular pattern (Figure 1).

The cells have scant to moderate cytoplasm and angulated hyperchromatic nuclei with pink material in tubules and hyalinization of the stroma, features suggestive of Adenoid cystic carcinoma. Family history was negative for breast cancer. In view of above findings, right modified radical mastectomy with axillary lymph node dissection was performed and histopathology was consistent with Adenoid cystic carcinoma, with the surgical margins free from malignant cells. Nineteen out of nineteen lymph nodes tested negative. The tumor was staged as T3 No Mo and was ER positive and PR negative, Her 2 neu negative.

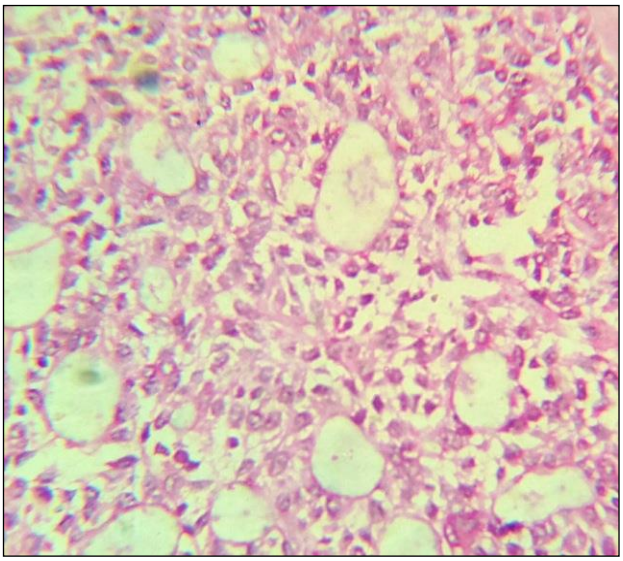

Figure 1: High magnification microscopic picture of adenoid cystic carcinoma stained by H and E stain showing neoplastic basolid cells arranged in cribriform pattern, cystic spaces are seen. The cells have hyperchromatic nuclei and scant to moderate cytoplasm.

DISCUSSION

Adenoid cystic carcinoma of the breast is a rare neoplasm accounting for 0.1% of breast carcinomas.[3] It is of special interest because of its favourable prognosis and distinctive histological appearance. This tumor occurs predominantly in women in their seventh decade but has been described between the ages of 30 and 90. Adenoid cystic carcinoma most frequently present as a tender breast lump. The prognosis is more favourable than other types of breast cancer as lymph node involvement and distant metastasis are rare.[4] The diagnosis can be made on fine needle aspiration cytology. Histopathologically, there are well formed islands of cohesive cells and regular small, sharply defined spaces. These islands have multiple microcystic spaces containing PAS-positive mucinous material with an acidic pH.[5] (True epithelial mucin has a neutral pH). The histological appearance of Adenoid cystic carcinoma and invasive cribriform carcinoma are similar.[6] Confirmation of the diagnosis can be obtained by Alcian blue staining, PAS staining, and immunohisto-chemistry, the cyst stain with Alcian blue and the ducts stain with PAS.[7] Ro classified adenoid cystic carcinoma in to three grades of tumor on the basis of the solid component as:

- Grade 1, completely glandular and cystic
- Grade 2, <30% solid component
- Grade 3, >30% of solid components.

All grade 3 tumors appear to behave like high grade ductal breast cancer. Most such tumors have negative ER-PR status.[8] The various options for treatment include lumpectomy, wide excision with or without radical radiation, or MRM. Axillary lymphnode dissection is rarely required because of the low incidence of spread to the axillary lymph nodes, which makes the present case extremely unusual.

CONCLUSION

Adenoid cystic carcinomas of the breast are extremely rare neoplasms of the breast and have good prognosis. Surgery is the main stay of treatment. Adjuvant chemotherapy and radiotherapy are of little role. The affected patients require close follow-up due to the rare, but possible, occurrence of distant metastasis.

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