MYOEPITHELIAL CARCINOMA ARISING IN ADENOMYOEPITHELIOMA WITH LYMPH NODE METASTASIS - A CASE REPORT

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Abstract:
Adenomyoepithelioma of the breast is a rare tumour. Malignant changes arising in this lesion is infrequent and only a few cases have been reported with lymph node metastasis. This is a case of 55 year old female who presented with painless breast mass of 4 months duration which was interpreted morphologically as myoepithelial carcinoma arising from adenomyoepithelioma with lymph node metastasis. This case is being highlighted for its rarity and distinct morphological spectrum

Keyword: Adenomyoepithelioma, myoepithelial carcinoma

INTRODUCTION:
Adenomyoepithelioma of the breast is a benign tumour characterised by biphasic population of epithelial and myoepithelial cells. It arises in women ranging in age from 26 to 82 years. Malignant changes can occur rarely in one or both cellular components and can be either a pure myoepithelial carcinoma or malignant adenomyoepithelioma. Around 30 cases of malignant adenomyoepithelioma have been reported in literature.

CASE REPORT:
A 55-year-old female presented with breast mass of 4 months duration. The mass was painless and there was no nipple discharge. Palpation revealed a firm mass in upper outer quadrant of the left breast. Examination of axilla revealed 3 nodes ranging in size from 0.5 to 1 cm. Fine needle aspiration revealed highly cellular smears showing cohesive and discohesive clusters of epithelial cells with moderate amount of cytoplasm showing nuclear pleomorphism and atypia. Fine needle aspiration smears were reported positive for malignance. Following this, patient underwent modified radical mastectomy with axillary clearance and the specimen was sent to our department. Gross examination showed a apparently circumscribed tumour with pushing margins, which was tan in colour with gray white areas and gray brown areas measuring 5 x 3.5 x 3.5 cm(fig-1). The tumour was firm in consistency and the cut margins were grossly free from the tumour. Attached fibro fatty tissue of axillary clearance revealed 11 nodes measuring 0.1 to 1.5 cm.

Mycroscope:
Multiple section studied from the breast mass show a tumour composed of dual population of cells. Focal tubular glands lined by cuboidal cells and vacuolated myoepithelial like cells(fig-2). In most other areas the cells are arranged in large lobules, islands and sheets. In these areas the cells are ovoid to short spindle shape with mild degree of nuclear pleomorphism and hyperchromasia(fig-3). Focal increase in cellularity, moderate pleomorphism and increased mitosis are seen(fig-4).Multiple section studied from the attached fibro fatty tissue reveals 11 nodes which show metastatic deposits in 1 node(fig-5,6). Lymphnode status–(1/11 ).

IMPRESSION: The mastectomy specimen show a malignant tumour morphologically myoepithelial carcinoma arising from adenomyoepithelioma with lymph node metastasis.
Immunohistochemistry was performed and the panel of markers include pancytokeratin(CK), smooth muscle actin (SMA), p53, EMA and S100. The results were interpreted as pancytokeratin showed diffuse cytoplasmic positivity(fig-7), p53 showed nuclear positivity of the ovoid cells(fig-10), EMA and S100 showed focal positivity(fig8&9) and SMA was negative.
DISCUSSION:

Adenomyoepithelioma is a rare benign tumour which presents as a palpable mass in a wide range of age from 3 rd to 9 th decade. Adenomyoepithelioma are usually predominantly solid rather than glandular. There are two cell types, myoepithelial and glandular component. Myoepithelial cells are polygonal or spindle shaped cells with clear or eosinophilic cytoplasm and form the outer layer where glands are present. The glandular component is composed of columnar or cuboidal cells.

The patterns of growth may be spindle cell(myoid), tubular or lobulated. In our case lobular and thespindle cell(myoid) pattern was seen. Malignancy arising in adenomyoepithelioma is very rare involving either the myoepithelial component or both component presenting as malignant adenomyoepithelioma. In myoepithelial carcinoma usually spindle cells predominates, these cells are atypical showing pleomorphism and frequent mitotic figures as in our case. Metastatic spread from malignant variants occur rarely (1) and most common route of metastasis is hematogenous. Distant metastasis have been described in 8 out of 25 cases reviewed by 2 authors, involving lung, brain, soft tissues, liver, bone and thyroid gland.(2-4) . Lymphatic spread is thought to be unusual. However metastasis to axillary lymph nodes have been reported in 3 previous cases of malignant adenomyoepithelioma(5-7). Myoepithelial markers are SMA, SMMH, P63, 34BE12, S-100 and caldesmin. In our study myoepithelial carcinoma component showed positivity for Pan CK, p53, EMA and S100. However SMA was negative. Cases of malignant myoepithelial tumors with focal expression or absence of SMA have been reported in literature.(8-10).

CONCLUSION

This case of Myoepithelial carcinoma arising from adenomyoepithelioma , presenting with lymphnode metastasis is unusual, most common being the hematogenous spread. Lymphnode with metastatic tumour deposits subjected to immunohistochemistry showed positivity for pancytokeratin,EMA, S100 and p53. Thus this proves the lymphatic spread of this tumour which necessitates an axillary dissection routinely.

REFERENCES


