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Case Report

Mixed Mucinous Carcinoma and Infiltrating Duct Carcinoma of Male Breast

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ABSTRACT

Introduction: Male breast carcinoma is rare, it accounts for 0.2% of all cancers in men and less than 1% of all diagnosed breast cancers. It usually presents late in life at a more advance stage with peak incidence at 71 years.
Presentation of case: 71 years old male presented with lump in left breast involving nipple and areola since 3 months .He had a strong family history. Physical examination revealed ulceroproliferative growth of 3 cms involving nipple and areola with left axillary lymphadenopathy. Breast ultrasonogaphy revealed well defined hypoechoic lesion with spiculate and illdefined margins involving retroareolar area. Fine needle aspiration was positive for malignant cells. Left modified radical mastectomy with level 2 axillary clearance was performed. Histopathology confirmed the diagnosis of mixed mucinous carcinoma and infiltrating duct carcinoma [Grade 2]. After surgery patient received chemotherapy. Postoperative period was uneventful.
Discussion: Mixed mucinous and infiltrating duct carcinoma is an extremely rare presentation .Risk factor includes genetics, exposure to radiation, cirrhosis, testicular trauma, obesity and familial factors. This patient had a strong family history. Mucinous carcinoma has pure and mixed components. Majority of cases of male breast cancers are infiltrating duct carcinoma. Standard treatment is modified radical mastectomy followed by chemotherapy, radiotherapy or hormonotherapy.
Conclusion: Mixed mucinous and infiltrating duct carcinoma is extremely rare. Breast carcinoma in male behave more aggressively compare to those in females.

Key Words: Male breast carcinoma; Familial; Mixed mucinous and infiltrating duct carcinoma.

INTRODUCTION

Male breast carcinoma is rare, it accounts for 0.2% of all cancers in men and less than 1% of all diagnosed breast cancers. It usually presents late in life at a more advance stage with peak incidence at 71 years. Mixed mucinous and infiltrating duct carcinoma is an extremely rare presentation. Decreased awareness of the existence of such a disease among male patients leads to its late presentation. We present a case of 71 year old male with lump in the left breast. He underwent Left modified radical mastectomy with level 2 axillary clearance.

Histopathology confirmed the diagnosis of mixed mucinous carcinoma and infiltrating duct carcionoma which is extremely rare.

CASE REPORT

A 71 year old male presented with lump in left breast involving nipple and areola since 3 months. He had a strong family history. Physical examination revealed ulceroproliferative growth of 3 cms involving nipple and areola, mobile, well circumscribed, firm with left axillary lymphadenopathy (Figure 1).

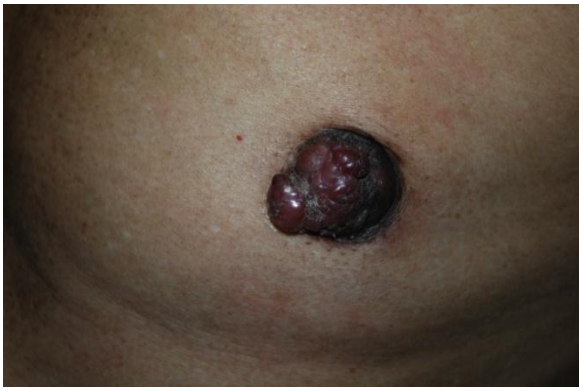

Figure 1: Growth involving nipple and areola.

Figure 2: Cut section showed a grey white firm mass.

Breast ultrasonogaphy revealed well defined hypoechoic lesion with spiculate and ill-defined margins involving retroareolar area. Fine needle aspiration was positive for malignant cells. Left modified radical mastectomy with level 2 axillary clearance was performed Cut section showed a grey white firm mass (Figure 2).

Microscopically, the diagnosis was based on the presence of neoplastic cells embedded in pool of mucin. Neoplastic cells are forming acini, clusters, cords as well as scattered single. Individual cells are round to oval having pleomorphic vesicular nuclei, prominent nucleoli and moderate amount of eosinophilic cytoplasm. Abundant extracellular mucin is noted (Figure 3 and 4).

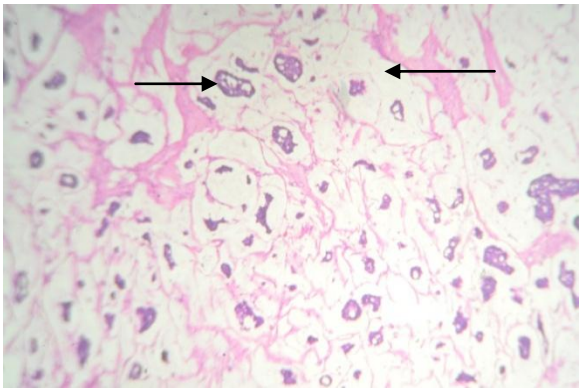

Figure 3: Neoplastic cells forming acini, clusters, cords as well as scaterred single individual cells with eosinophilic cytoplasm. Abundant extracellular mucin is noted.

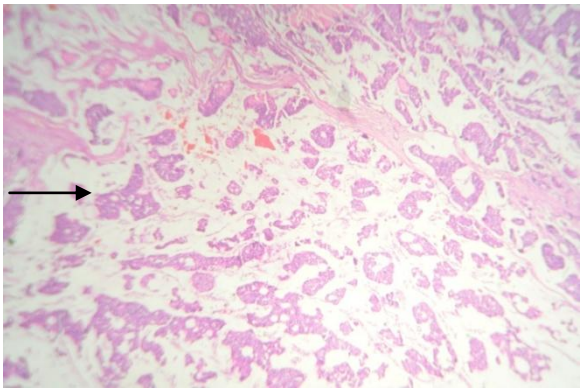

Figure 4: Neoplastic cells embedded in pool of mucin.

Histopathology confirmed the diagnosis of mixed mucinous carcinoma with Ductular Carcinoma in situ-cribiform pattern and infiltrating duct carcionoma [Grade 2]. Nipple, areola and 6 out of 6 lymph nodes were involved by the tumour. Deep surgical margins, all peripheral surgical margins were free from tumour. After surgery patient received chemotherapy .Postoperative period was uneventful.

DISCUSSION

Male breast cancer is a rare disease that accounts for less than 1% of all cancers in men and less than 1% of all diagnosed breast cancers.[1] Major genetic factors associated with an increased risk of men breast cancer have been identified including BRCA2 mutations, Klinefelter syndrome and a family history of breast carcinoma. Epidemiologic risk factors for male breast cancer include disorders relating to hormonal imbalances such as obesity, testicular disorders and radiation exposure. Suspected epidemiologic risk factors include prostate cancer, gynecomastia, professional exposures, dietary factors and alcohol intake The most frequent types (about 90%) were invasive ductal carcinomas.[2] Invasive ductal carcinoma in men presents peculiar features. About 42% of breast cancer cases in men are diagnosed in stage III or IV.[3] This is probably because men do not seek medical attention for breast masses as quickly as women. In addition, the tumor is usually closer to the skin in males, which increases the likelihood of infiltration into the dermis. Mucinous carcinoma of the male breast is an extremely rare neoplasm accounting for less than 2% of male breast carcinomas; it is slightly more uncommon in men than in women. Histologically, mucinous carcinoma can be classified as mixed or pure forms. The latter is characterized by variable amounts of extracellular mucin surrounding tumor cells. Mucinous tumors, with invasive areas not surrounded by mucin, are considered as a mixed mucinous carcinoma.[4] The prognosis for pure mucinous carcinoma was much better than for mixed. Pure mucinous carcinoma usually presents as a round and well circumscribed lesion on the mammography. On breast ultrasonography, the tumor has well defined margins, and it is iso-echogenic relative to the fat surrounding the breast tissue.[5,6] In general, pure mucinous carcinoma is accompanied by a better prognosis and a low rate for axillary lymph node metastases than mixed type.[7] A mixed mucinous carcinoma should be treated in the same manner as an infiltrating duct carcinoma would be The incidence of lymph node metastasis of pure mucinous carcinoma was very low. [7,8] The presence of abundant extracellular mucin may act as a barrier and diminish the tumor cell burden in mucinous carcinoma at the invasive margins.[7] The standard treatment of male breast cancer is modified radical mastectomy combined with axillary lymph node dissection followed by chemotherapy (cyclophosphamide, adriamycin and 5-fluorouracil), radiotherapy or hormone-therapy (Tamoxifen).

CONCLUSION

Mixed mucinous and infiltrating duct carcinoma is extremely rare. Breast carcinoma in male behave more aggressively compare to those in females. Standard treatment is modified radical mastectomy followed by chemotherapy, radiotherapy or hormonotherapy. The need for the awareness of early diagnosis is stressed with emphasis on surgical management.

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