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General Surgery

Male Breast Carcinoma Presenting As a Lump in Axilla: Case Report

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Abstract **Case Report**

Carcinoma of an accessory mammary gland is an extremely rare tumor. A 63 year old male patient presented with a hard mass of 2×2cm in the right axilla. Excisional biopsy showed an adenocarcinoma histopathologically which is similar to breast carcinoma originating in an accessory mammary gland. There is no evidence of primary lesion in both the mammary glands or in the other organs.

Keywords: Breast Carcinoma histopathologically tumor mammary glands.

INTRODUCTION

Adenocarcinoma in the axilla is uncommon and can be regarded as breast cancer arising in an accessory mammary gland or metastatic lymph nodes from breast cancer or another primary cancer. Herein, we describe a male patient with an axillary malignant tumor which resembles with breast carcinoma in an accessory mammary gland.

CASE REPORT

A 63-year-old male patient came to our opd complaining of a swelling in right axilla since 1year. Patient first noticed a small subcutaneous nodule 1year back which was insidious in onset, gradually increasing in size and attained the present size. No history of any nipple discharge or discharge from swelling, no history of pain, no history of trauma. No history of weight loss/chest pain/cough/low backache/abdominal pain. Physical examination revealed bilateral gyneacomastia and an irregular, immobile, hard mass measuring approximately 20mm × 20mm in the right axilla (fig.1). Ultrasonography revealed no primary lesion in bilateral mammary gland and ipsilateral breast tail. The provisional diagnosis of breast carcinoma was made and Fine Needle Aspiration Cytology FNAC was advised and it showed adnexal tumor. Excisional biopsy was done. The pathological diagnosis of excisional biopsy was invasive ductal carcinoma with the immunihistochemistry of ER positive, PR positive and HER2 negative. Modified Radical Mastectomy of right breast was done with ipsilateral axillary dissection and left simple mastectomy.

Fig-1: An irregular, immobile, hard mass measuring approximately 20×20mm exposed in the right axilla

Grossly the mastectomy specimen on the right side was measuring 12×6×3 cm, nipple and areola was normal. Cut section showed a grey white mass measuring 1.5×1.3×1 cm. Histopathology (Fig 3) showed skin infiltrated by the tumour arranged in nest, cribriform, clusters and cords. The monomorphic tumour cells are round to oval with hyper chromatic mildly pleomorphic eccentrically placed nuclei with inconspicuous to prominent nucleoli and scanty eosiniphilic cytoplasm. The desmoplastic stroma shows sparse mononuclear cell infiltration. The adjacent breast shows changes of gyneacomastia with focal epithelial hyperplasia. Perineural invasion is seen. Lymphovascular tumour emboli were not seen.

Grossly the mastectomy specimen on the left side was measuring 11.5×6×3 cm and histopathology showed gyneacomastia with no evidence of tumour.

Fig-2: Intra operative image after removing specimen

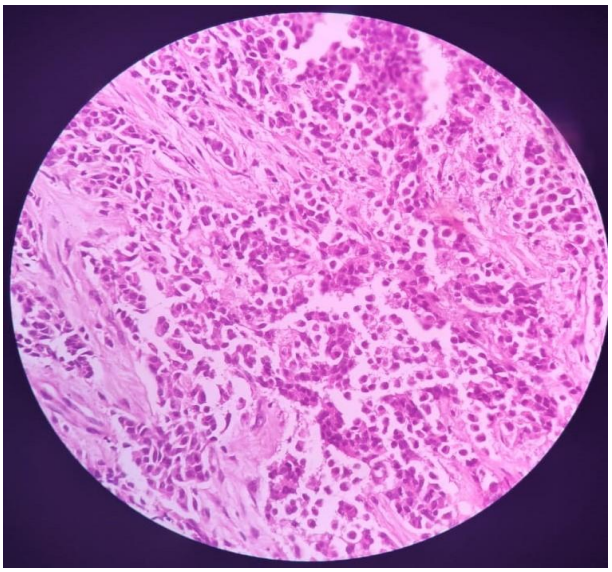

Fig-3: H/E smear showing round to oval tumour cells with round to oval vesicular nuclei with moderate amount of eosinophilic cytoplasm and desmoplastic stroma with diffuse mononuclear cell infiltration

DISCUSSION

Male Breast Carcinoma (MBC) is an uncommon neoplasm, accounting for 0.6% of all breast carcinomas and <1% of malignancies in men [1, 2]. Men tend to be older at the time of diagnosis compared with women, with a median age at diagnosis of 67years compared with 62 years for women. It has been reported in the literature that the incidence of male accessory breast cancer is higher than that of breast cancer [3, 4]. The exact cause of male accessory breast cancer is not yet fully understood, but any risk factor that may induce breast cancer can trigger accessory breast cancer [5]. The main risk factors include the following. 1) Genetic factors: BRCA1, BRCA2, P53, PTEN, PALB2, RAD50, and CDH1 are the susceptibility genes for breast cancer development, especially BRCA2, which plays an important role in the susceptibility of male breast cancer;[6] 2) Hormonal factors: the increase in estrogen's effect or an imbalance in estrogen and androgen levels is a risk factor for male breast cancer;[7] 3) Environmental factors: electromagnetic field exposure may be associated with the increased risk of male breast cancer despite the arguments raised[8]. In addition, the long-term exposure to high temperature or environments with styrene and formaldehyde can also induce male breast cancer; and [9] 4) Other factors such as alcoholism, obesity, depression, drugs, and lack of exercise are also contributors. Men with BMI of ≥30 kg/m^2 had an 80% increased risk of breast cancer compared with men with BMI of less than 25 kg/m^2. Since accessory mammary glands are located in the subcutaneous and dermal tissues of the skin [10], accessory breast cancers are often located in superficial areas, have hard textures and unclear boundaries, and can protrude and adhere to the skin and even cause ulceration. For masses appearing on the breast line (the line from axilla to groin), accessory mammary glands should be considered. The gold standard for the diagnosis of accessory breast cancer is still pathological examination. In addition to the typical histological characteristics of breast cancer, the positive expression of breast-derived immunohistochemical markers can also further confirm the diagnosis. Prognosis in male breast carcinoma is poor, may be due to the smaller size of breast mass, which increases the probability of the involvement of surrounding structures. Prognosis depends on the stage at diagnosis as determined by tumour size and nodal metastasis. Male breast cancer presents usually as luminal a like subtype, 88% express androgen receptors, only 1% is triple negative, and 9% HER-2 positive. The treatment of accessory breast cancer is similar to that of breast cancer and follows the principle of comprehensive treatment, with surgery as the main treatment, supplemented with chemotherapy, radiotherapy, endocrine therapy, and molecular targeted therapy. If the diagnosis of accessory breast cancer in the axillary area is clear, an extended resection of the accessory mammary gland region with axillary lymph node dissection should be performed [11]. It is not necessary to remove the ipsilateral breast unless the accessory breast cancer is very close to the mammary gland or is connected to the mammary gland or unless invasion of cancer cells in the ipsilateral mammary gland has been observed. If the preoperative tumour is large, neoadjuvant chemotherapy or endocrine therapy can be performed first, and the surgery can be performed after the tumor is significantly reduced. For patients with accessory breast cancer, postoperative conventional radiotherapy is recommended to reduce the risk of local recurrence [4].

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