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A Secondary Breast Tumor in a Man: A Case Report

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Abstract **Case Report**

Breast metastases can clinically and radiologically mimic primary breast cancer. Morphological characteristics do not allow for a definitive diagnosis. Immunohistochemistry can help direct the diagnosis towards an urothelial origin. We present the case of a 70-year-old patient who had a breast metastasis from bladder cancer.

Keywords: Metastasis, Breast, Urothelial Carcinoma.

INTRODUCTION

Breast cancer in men is rare, accounting for about 1% of all breast cancer cases. Metastatic breast tumors from extramammary cancers are infrequent, estimated at 2% of all malignant breast tumors. The cancers that most commonly metastasize to the breast include hematological cancers, melanomas, lung cancers, and gastrointestinal cancers, while bladder cancer is exceptionally rare. Only a few cases have been documented in the literature. We report a case of metastatic bladder cancer to the breast in a male patient.

CLINICAL CASE

The patient is a 70-year-old chronic smoker with a history of 20 pack-years who underwent radical cystoprostatectomy five years ago for bladder urothelial carcinoma. He presented with an isolated breast nodule discovered during self-examination. Clinical examination revealed a hard, painful nodule that was mobile relative to deep tissue planes. Lymph nodes were free, and the contralateral breast appeared clinically normal. Breast ultrasound showed a tissue formation with irregular contours, while the contralateral breast showed no notable radiological abnormalities. The patient underwent surgical intervention; during exploration, the tumor was found to be ulcerated and adherent to the anterior fascia of the pectoralis major muscle. A lumpectomy including the nipple and fascia was performed, and postoperative recovery was uncomplicated. Histological examination favored a mammary localization of poorly differentiated carcinoma compatible with a bladder origin.

DISCUSSION

Breast metastases from extramammary primary tumors are extremely rare, representing between 1.7% and 6.6% of malignant breast tumors. The most common primary tumors include melanomas, bronchopulmonary cancers, gynecological cancers, gastrointestinal cancers, leukemias, lymphomas, sarcomas, and renal cancers [1]. Bladder cancer rarely metastasizes to the breast in men; the first case of mammary metastasis from urothelial carcinoma in men was reported by Truesdale *et al.*, in 1979. Intra-mammary metastases typically occur metachronously relative to the primary cancer, with intervals ranging from several months to years. From a pathophysiological perspective, the vascularization of the breast appears to be an important factor in the development of these intra-mammary metastases. The disseminated tumors primarily exhibit hematogenous spread and are most frequently found in the supero-external quadrant, which is the most vascularized area of the breast [1].The diagnostic approach relies on correlating clinical, radiological, and pathological data. Clinically, intra-mammary metastases may be confused with benign or malignant primary tumors of the breast [2]. The diagnosis is more readily suggested in cases of multiple lesions and/or bilateral involvement [3]. Imaging signs are often nonspecific; lesions typically appear round, well-defined, and regular on mammography and hypoechoic on ultrasound, potentially resembling benign tumors [4]. The presence of multiple lesions facilitates diagnosis even if it is not the most common scenario observed [1]. In most cases, intra-mammary metastasis diagnosis is confirmed

through pathology. Few cytological or histological characteristics definitively confirm intra-mammary metastasis; however, certain elements may suggest the type of primary cancer. If diagnostic difficulties arise, further studies using immunohistochemistry should be conducted [2]. Prognosis is poor when metastases occur, with an average survival of only a few months. Management is primarily palliative; however, if no other metastases are present, surgical intervention via lumpectomy may be considered [5, 6].

CONCLUSION

Breast metastases can clinically and radiologically simulate primary cancer. Morphological characteristics do not provide definitive diagnostic certainty; immunohistochemistry can help direct diagnosis towards an urothelial origin.

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