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Secretory Carcinoma of the Breast: A Case Report

Bartu Badak
Department of General Surgery, Banaz State Hospital, Banaz, Uşak, Turkey

***Corresponding author**
Bartu Badak
Email: drbartu@gmail.com

Abstract: Secretory breast carcinoma is a rare variant of invasive breast cancers. This tumor was first classified in juvenile age breast tumors category and, however, with the increase in the incidences of these tumoral structures in adults, it was included in adult breast cancers classification. This paper presents a 38 year old female patient who admitted with complaints of palpable mass in the right breast and reported as 'malignant epithelial tumor' as a result of excisional biopsy and diagnosed with 'secretory carcinoma' following a right modified radical mastectomy in the continued process and axillary dissection.
Keywords: Secretory breast carcinoma, Breast cancers, Breast.

INTRODUCTION

Secretory breast carcinoma is a rare variant of invasive breast cancers. This tumor was first classified in juvenile age breast tumors category and, however, with the increase in the incidences of these tumoral structures in adults, it was included in adult breast cancers classification [1]. It's a rare, slowly progressive tumor and constitutes less than 1% of the infiltrative breast cancers [2]. Although it is generally seen in children, it can be seen in all age groups [3]. The majority of patients are females, however males are also available case reports [2]. More than 95% of breast tumors are of epithelial origin and secretory breast cancer accounts for less than 1% of all breast cancer types [4]. Secretory breast carcinoma was originally defined in 1966 by McDivitt and Stewart as a variety of breast tumor seen in children and adolescent females, which they designated as 'juvenile carcinomas'. However, Tavassoli *et al.;* (1980) determined that tumoral structure with the same histomorphological features, albeit rare, were also seen in adults and recommended replacing the term 'juvenile carcinoma' with the term 'secretory carcinoma' [1]. The clinical entities were almost the same in young and adult patients and the most common complaint was smooth surfaced, painless palpable mass. These masses are often confused with fibro adenoma [5]. The survival is long even in patients with positive axillary metastases [6]. This paper presents a 38 year old female patient who admitted with complaints of palpable mass in the right breast and reported as 'malignant epithelial tumor' as a result of excisional biopsy and diagnosed with 'secretory carcinoma' following a right modified radical mastectomy in the continued process and axillary dissection.

CASE REPORT

The 38 year old patient admitted to our clinic which is a 2nd level health-care provider with complaints of palpable mass in the right breast for 3 months; a smooth surfaced palpable mass with an approximate radius of 3cm was palpated at 9 o'clock position in the right breast. There were no significant physical examination findings in the other breast. A smooth contoured hypoechogen mass with a 25 mm radius and 3 cm distance to the nipple at 9 o'clock position was observed in the bilateral breast ultrasound. Fibroadenoma-complicated cyst Findings was detected. In the mammography glandular structures with contours in regular appearances and superposed homogeneous mass lesions (cysts) with the largest of which was 33 mm were detected in the upper outer quadrant of the right breast. (BRADS 4A) The patient was scheduled for diagnostic excisional biopsy. The mass was completely excised and sent to examination. The pathological examination was reported as 'malignant epithelial tumor'. It was reported that the whole biopsy material was composed of tumoral lesion; tumor cells were fairly in pleomorphic appearance and had bizzare nuclei in some places, there were pseudo glandular differentiations in many areas and numerous mitotic figures were observed. Thereupon, the patient was scheduled for a right modified radical mastectomy. Subsequently, the operation was performed at an advanced center, and the patient was diagnosed with secretory carcinoma as a result of specimen tracking. The immunohistochemical findings were Cerb B2 (++), p53 %5(+), Ki67 %30 (+), E-Cadherin (+), CEA (+), CK 5/6 (+), CD117 (+), S-100 (-), estrogen receptor (-), progesterone receptor (-), CD31 (+). In the histochemical examinations PAS was (+) and Alcian Blue was (+). Histological grade (elston) III/III, tubular

differentiation score was 3, pleomorphism score was 3, mitosis (Olympus B*50) score was 2, intraductal carcinoma extent was (+) 2% (comedo type, nuclear grade 3), lymphovascular invasion was (+), micro calcification was (-), macroscopic tumor diameter was 7*6.5*4.5 cm, the number of metastatic lymph nodes was 16 (+) and reactive lymph nodes were reported as 19.

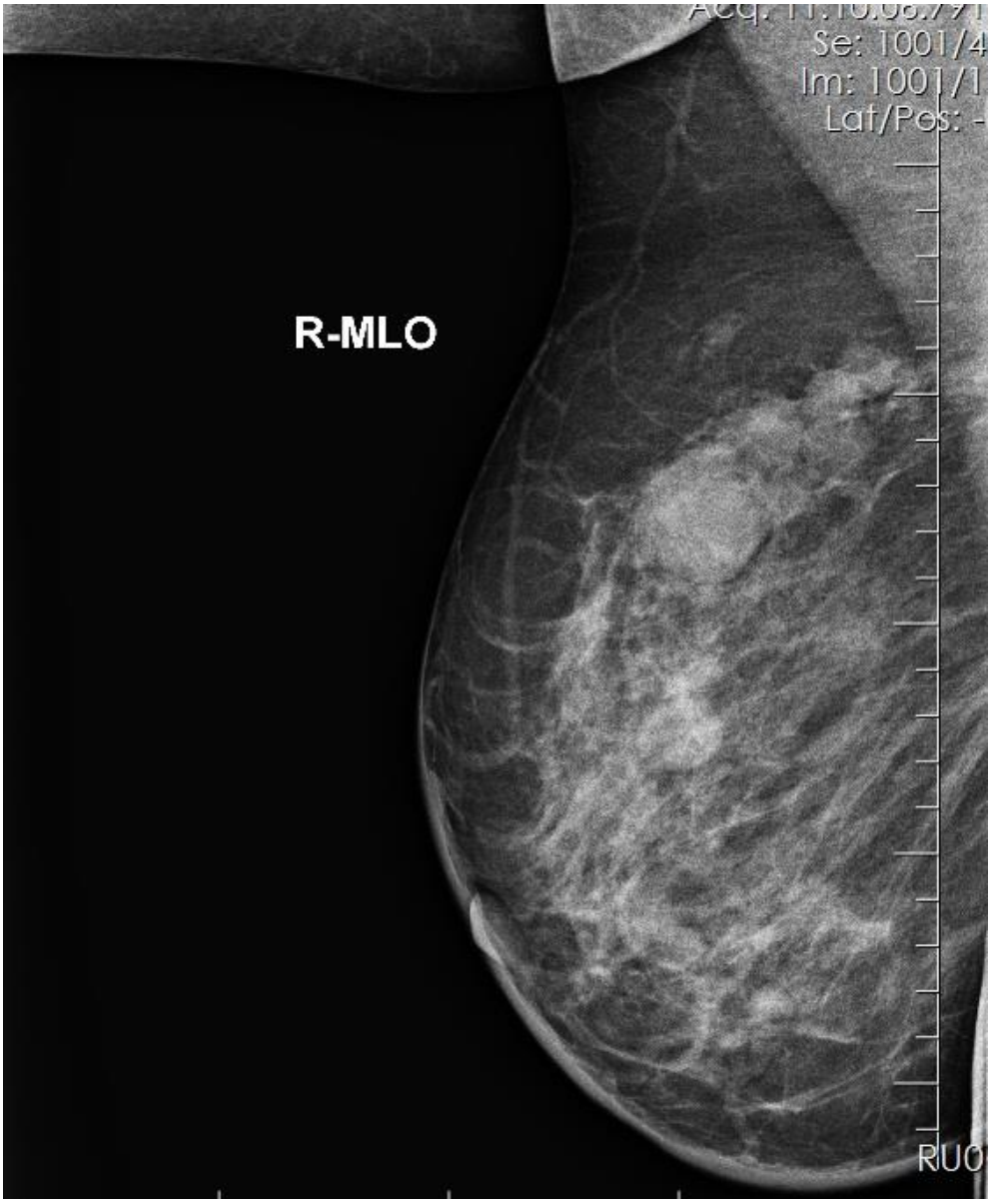

Fig-1: Mammography image of the breast mass

DISCUSSION

Secretory breast cancer comprises less than 1% of the invasive breast cancers. Although it was first defined in 1966 by Mc Divitt and Stewart as 'juvenile carcinoma', due to the average age of the cases being higher than 20 and numerous secretory luminal materials detected histomorphological examinations, it was described as 'secretory carcinoma'[7]. Holding any breast quadrant, secretory carcinoma is most commonly presented as retroareolar, well-circumscribed, mobile, hard masses. The average mass size 1.5 *-3 cm and, variable tumors up to 16 cm were also reported [8]. Clinical and radiological often mimic fibro adenoma and fibrocystic changes. There are also clinical presentations including bloody nipple discharge [9]. There was no bloody nipple discharge in our case, but hard, mobile, smooth surfaced mass. The macroscopic view of the SBC is smooth and well circumscribed, hard, in yellow-white color while the microscopic examination constitutes granular cells which contain polygonal secretory material with vacuole cytoplasm, specifically stained by PAS. Estrogen and progesterone receptors are negative except for sporadic cases. [7] Our case also showed characteristics which support the

literature. Due to a limited number of reported, there is no accepted algorithm regarding neither surgical nor adjuvant treatment protocols. Minimal surgical procedures have been proposed due to non-aggressive course of the tumor. [7] There are various methods available for surgical treatment from modified radical mastectomy to local excision. Complete total excision and gradual axillary lymph node dissection can be suitable if the tumor is smaller than 2 cm whereas axillary lymph node dissection along with simple mastectomy must be considered if the tumor is bigger than 2 cm. There are no information regarding the roles of postoperative radiotherapy and chemotherapy. [10] The adopted opinion for now is that SBC is chemo resistant. Prognosis was accepted to be better compared to classic ductal carcinoma and in some series survival for 5 years was reported to be 100%. [2] The disease has a more aggressive course in older patients compared to young patients.

CONCLUSIONS

SBC is a rare tumor, of epithelial origin, which can be seen starting from childhood to even advance ages. Due to different opinions both in diagnostic and treatment stages, treatment options should be designed patient specific. We believe that a multidisciplinary approach consisting of surgeons, oncologists, radiologists and a patient specific treatment will be the most suitable option in this cancer type which has not reached to adequate number of patients yet.

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