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Intracystic Squamous Cell Carcinoma of Breast- an Interesting Rare Diagnosis

Medical Science

KEYWORDS : intacystic, squamous cell carcinoma, breast

Dr Unnikrishnan G	Assistant Professor, Department of General Surgery, Government Medical College, Trivandrum
Dr Aravind S Ganapath	Junior Resident, Department of General Surgery, Government Medical College, Trivandrum
Dr Anoop S	Junior Resident, Department of General Surgery, Government Medical College, Trivandrum

ABSTRACT

Squamous cell carcinoma breast is an uncommon breast neoplasm accounting only less than 0.1% of all breast neoplasms. It is a type of metaplastic breast carcinoma where part or all of the carcinomatous epithelium is transformed into non glandular elements. Clinically it behaves quite different from adenocarcinoma breast. Generally this disease has a poor outcome and the natural history remain confusing. There is no standardised treatment regimen for this condition and in most occasions, treatment is based on corresponding clinical stage in ductal adenocarcinoma. Described here is a case of 46 year old female with a breast lump, wide local excision of which revealed squamous cell carcinoma of breast and then upon the aggressiveness of the condition underwent modified radical mastectomy. The patient is on regular follow up.

Introduction

Metaplastic breast carcinoma account for only <1% of all breast cancer[1]. It is an aggressive form of breast cancer. Intracystic squamous cell carcinoma is an extremely rare type of metaplastic breast carcinoma. There are only limited data in the form of isolated case reports about its natural course and studies focusing on treatment and outcomes are lacking[2].

We report a case of breast lump that was diagnosed as intracystic squamous cell carcinoma upon wide local excision and subsequently patient underwent modified radical mastectomy.

Case details

46 year old housewife presented with swelling in right breast for 1 year duration with rapid increase in size over past 1 month with associated nipple discharge for last 1 month which was initially serous then became blood tinged in the past 1 week. She had no complaints of pain. She had no history of trauma or past history of any swelling in the breast. She had no complaints of any other swellings in the body.

She attained menarche at 12 years and has regular cycles and married at 24 years of age and has 2 Children and both of them were breast fed for more than a year.

Her mother has history of carcinoma oral cavity. There is no history of breast lump or gynecological malignancy in family.

On examination she had a 4x3 cm firm lump in upper outer quadrant of right breast with no puckering or dimpling of skin, there was no local rise of temperature or tenderness. The swelling had an irregular surface with no skin fixity. Circumferential nipple retraction was present. Areola was normal. There was no fixity to underlying fascia or muscles.

Left breast appeared normal. There was no axillary lymphadenopathy and head to foot examination revealed no other significant abnormality.

Her blood investigations were all normal.

She underwent a fine needle aspiration cytology which reported as highly suspicious of malignancy. Then we did a core needle biopsy which didn't report any evidence of malignancy in the multiple serial sections studied. Meanwhile we did a mammogram which reported an irregular opacity in right breast with BIRADS category 4C. So we repeated the core needle biopsy which again didn't reveal any evidence of malignancy.

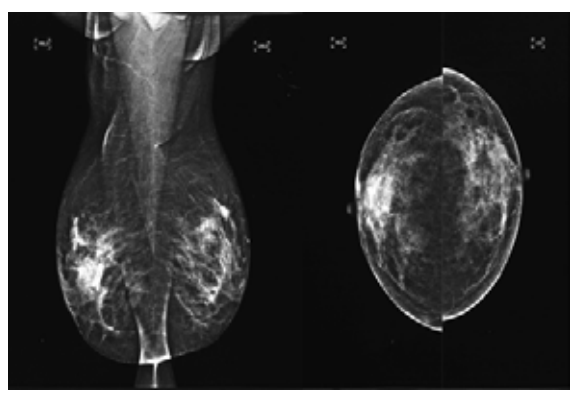

Figure 1- mammogram showing irregular opacity in right breast – BIRADS 4C

We went ahead with wide local excision of the swelling in right breast and the histopathology report was a surprise-intracystic squamous cell carcinoma 2.5 x 2 x 1.5 cms possibly arising in duct papilloma. The resected margins were free of neoplasm and tumor cells were negative for estrogen & progesterone receptor.

Upon follow up after 4 weeks we detected a doubtful lesion and did a magnetic resonance mammogram which suggested recurrence. We then discussed the situation with patient and proceeded with modified radical mastectomy right breast and the histopathology report came as no evidence of malignancy. The patient is now on regular follow up.

Discussion

Squamous cell carcinoma is a common malignancy of the skin and other organs surrounded with squamous cells such as the esophagus, oral cavity, penis and the anus . Pure primary squamous cell carcinoma of the breast is an extremely rare condition [3]. It represents less than 0.1 % of all breast carcinomas. It is diagnosed if more than 90 % of

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the malignant cells are squamous.[4]. It is thought to arise directly from the epithelium of the mammary ducts, although an alternate theory is that the tumor arises from foci of squamous metaplasia within a preexisting adenocarcinoma of the breast which is also known as metaplastic breast carcinoma which is now considered by many as the more possible explaination than a primary squamous cell carcinoma breast[5]. The mean age at presentation is 54 years[6]. The squamous cell carcinoma of the breast are generally large (usually > 4 cm) at diagnosis and cystic in around 50% of the cases [7]. Whether investigations, such as positron emission tomography scans, in search of distant metastases or a primary squamous tumour site should be performed is still not clear [8]. The squamous cell carcinoma breast is usually a high-grade and hormone receptor-negative tumor which implies the aggressiveness and that hormone-based therapy may not be effective for these tumors[9]. This condition is often treatment refractory. The role of platinum salts, monoclonal antibodies and other novel agents needs to be explored [10]. The treatment options as of now does not differ from other common histological types of breast cancer and may involve surgery, chemotherapy, hormonal therapy and radiation therapy. Because of its rarity the most appropriate therapeutic regimen is still unclear.

Conclusion

Intracystic squamous cell carcinoma of breast is a rare aggressive form of breast carcinoma and urgent studies are necessary to study its natural course and to formulate the most appropriate treatment regime for this condition.

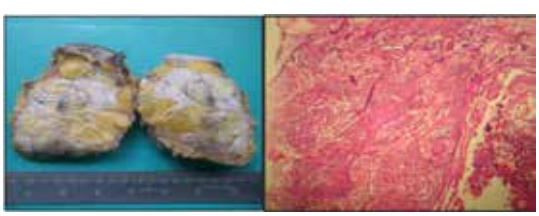

Figure 2-Gross photograph on left showing intracystic tumor and microscopic picture on right showing keratin pearls in squamous cell carcinoma

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