Bilateral DCIS following gynecomastia surgery. Role of nipple sparing mastectomy. A case report and review of literature

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Abstract

Bilateral ductal carcinoma in situ of breast is a very rare disease in men. Ductal carcinoma in situ (DCIS) is an abnormal proliferation that involves the ductal epithelium and it has the potential of evolving into an invasive tumour. Gynaecomastia (female like breast in men) is a benign condition though it is associated with a reported 3% incidence of unilateral invasive breast cancer. Synchronous bilateral breast cancer in association with gynaecomastia is exceptionally rare. The recommended treatment for DCIS in male is mastectomy. So far only 2 cases of bilateral DCIS in male patients has been reported in the literature treated with skin and nipple sparing mastectomies. We report another case of synchronous bilateral DCIS in a male treated with skin and nipple sparing mastectomies. A 44-year-old man with history of longstanding gynaecomastia. He had no identifiable risk factor for the development of cancer. His pre operative assessment of breast including mammograms was normal. He underwent bilateral subcutaneous mastectomies, with subsequent incidental diagnosis of synchronous bilateral ductal carcinoma in situ. The case was discussed in multidisciplinary team meeting and the need for further surgery was felt including excision of nipple areola complex. However considering patient wishes, cosmetic outcome and recent literature it was decided to preserve nipple areola complex (NAC) with regular follow up evaluation. Our patient at completion of 18 months of treatment is doing well with no signs of local recurrence.

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1. Introduction

Gynaecomastia is a common condition, with a reported incidence of 30–50% and often bilateral. Histologically the normal male breast consists predominantly of fat with a few secondary ducts, in gynaecomastia there is increased duct formation with prominent stroma typically benign (Fig. 1). Ductal carcinoma in situ (DCIS) is an abnormal proliferation that involves the ductal epithelium and it has the potential of evolving into an invasive tumour. Gynaecomastia is associated with a reported 3% incidence of unilateral invasive breast cancer. Synchronous bilateral breast cancer in association with gynaecomastia is exceptionally rare.

Herein we present a case of synchronous incidental bilateral DCIS in man treated with bilateral nipple sparing mastectomies. In a large series of nipple sparing mastectomies only small percentage of patients were found to have occult positive retro-areolar biopsies and it was suggested that it is safe to preserve the nipple areola complex if the retro-areolar biopsy is negative. There are at least 2 prior reports of nipple preservation in the treatment of bilateral DCIS in men.

2. Case presentation

A 54-year-old male presented with a 4-year history of painful enlargement of both breast. He was otherwise fit and healthy with no history of hormonal use or medications. His family history was negative for breast cancer or any other cancer. Physical examination revealed bilateral gynaecomastia, more prominent on right side with no suspicious nodules. Bilateral mammogram was reported as male pattern breast with bilateral gynaecomastia (Fig. 2).

He first underwent liposuction of bilateral gynaecomastia and 184 ml of liquefied breast tissue was aspirated. After an interval of 3 months, he had bilateral subcutaneous mastectomies for residual gynaecomastia and 156 g of fibro-glandular tissue was excised from right breast and 78 g from left breast. Histological examination revealed atypical ductal hyperplasia and low-grade ductal carcinoma in situ with papillary and cribriform pattern in both breast. No invasive cancer was seen. It was difficult to certain about the size of the DCIS as blocks were taken randomly from the unoriented specimen, however the estimated size was between 30 and 40 mm in maximum dimension (Fig. 3).

The case was discussed in breast multidisciplinary team meeting, and as histology was unable to give information about the completion of excision, the need for removing the nipple areola complex was felt. This was discussed with patient considering his wishes it was decided to preserve nipples. At 18 months of follow-up he had no signs of recurrence of cancer (Fig. 4).
3. Discussion

DCIS of the male breast is extremely rare tumour. Of all the cases of breast cancer <1% occur in men and DCIS accounts for approximately 5% of the cases of all male breast cancers. Even more rare is the incidental diagnosis of synchronous bilateral DCIS in association with surgery for benign gynecomastia. Due to the small number of cases in men, the management of the DCIS is based on evidence derived from the data of female patients and from retrospective studies of a limited number of male patients with breast cancer.

DCIS in males, like in females has a good prognosis and simple mastectomy without axillary surgery or adjuvant chemo radiation is the recommended treatment.5,7 Lumpectomy or local excision are not considered to be preferred treatment as these lesions are mainly subareolar and nipple excision is required. Axillary surgery or sentinel node biopsy is unnecessary, except if the lesion is comedocarcinoma or large where the risk of occult micro invasion would be increased.

Preservation of nipple areola complex in breast cancer surgery is driven mostly by patient wishes. Current literature is suggesting low recurrence rates following nipple sparing mastectomy (NSM) and now it is widely accepted as a prophylactic procedure but therapeutic NSM is still debatable. Reported rates of nipple involvement ranges from 0% to 58%, depending on the size of the primary tumour, multi-centricity, and lymph node positivity.3,8,9 A review of the literature suggests breast cancers may be amenable to retaining the nipple if they meet specific oncologic criteria. Data from multiple series of NSM in women show that properly screened patients have a low of local recurrence. Scchini et al.8 reported only 2 local recurrences in a series of 123 patients who had NSM with breast reconstruction, one had DCIS and the other cancer was invasive. We routinely perform retro-areolar biopsy for nipple sparing mastectomy in women with breast cancer. This patient had a nipple sparing mastectomy for presumed benign breast disease, so a retro-areolar biopsy was not performed. We suggest routine retro-areolar biopsies should be performed if there is an intention to do nipple sparing mastectomies.

4. Conclusion

This case underscores the rare but real possibility of detecting breast cancer incidentally following gynecomastia surgery. The treatment of DCIS in male patients requires an individualized approach within the context of a multidisciplinary team taking into consideration, the type, grade, site and size of the DCIS. While offering NSM, in treatment of DCIS the patient must be counselled about limited follow-up data on recurrence and outcome.

Conflict of interest statement

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Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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