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Original Research Article

Patient satisfactory score post oncoplastic breast surgery- our institutional experience

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ABSTRACT

Background: Surgical management of breast cancer is rapidly evolving with increasing importance on techniques to preserve patient's quality of life and post treatment cosmesis. Oncoplastic breast surgery (OBS) combines oncologic principles with plastic surgery techniques to improve cosmetic results by immediate breast reconstruction at the time of surgery. We aimed to evaluate patient reported satisfaction using questionnaire following OBS.

Methods: This was a prospective observational study of 25 patients who underwent oncoplastic breast surgery at the department of surgical oncology, Government Royapettah hospital, Kilpauk Medical College Chennai, between 2021 January - September 2022. Patients who underwent OBS were given the questionnaire (BREAST-Q) directed specifically on satisfaction with breast cosmesis at one month postoperatively.

Results: Mean satisfactory score was 42.4 (highly satisfied), 5 out of 25 (20%) patients responded with a score of 50/50. The patient with a minimum score of 26/50, had undergone wise pattern mammoplasty for giant fibroadenoma and had nipple areola complex necrosis postoperatively. No major complications were noted in other patients.

Conclusions: OBS is emerging as the standard of care in India for early breast cancer, although time taken is longer than the west. Long term outcomes in the Indian population are yet to emerge. Our results demonstrate a high satisfaction with breasts cosmesis in patients who underwent OBS.

Keywords: Oncoplastic breast surgery, Patient satisfaction

INTRODUCTION

Surgical management of breast cancer is rapidly evolving with increasing importance on techniques to preserve patient's quality of life and post treatment cosmesis. Oncologic radical resection of disease has been proven to negatively affect patient's perception of body image, sexuality and self-esteem which will impact their Marriage, family and social life.¹ While breast conservative surgery (BCS) has shown equal oncological results to more radical surgeries, 10 to 30% of patients reported unsatisfactory outcomes.² Removing more than 20% of breast volume greatly increases the risk of deformity, therefore patients with large breast tumours

may not achieve aesthetically satisfactory results with breast conservative surgery.

Oncoplastic breast surgery (OBS) combines oncologic principles with plastic surgery techniques to improve cosmetic results by immediate reconstruction of breast at the time of surgery. Cosmetic results have been shown to be better with OBS compared with standard lumpectomies.³ Oncological safety and complications are comparable to standard lumpectomies. In fact, OBS is associated with wider margins contrary to expected and does not result in delay for adjuvant treatments.⁴ A 2014 meta-analysis demonstrated a reduction in positive margin and decrease the rates of re-operation with use of

oncoplastic techniques.⁵ But the question remains: are patients more satisfied with OBS.

We aimed to evaluate patient reported satisfaction using questionnaire following OBS.

METHODS

This was a prospective observational study of 25 patients who underwent oncoplastic breast surgery at department of surgical oncology, Government Royapettah hospital, Kilpauk Medical College Chennai, between 2021 January - September 2022. We included patients with carcinoma breast (T1-2, N0) and benign disease (like giant fibroadenoma) who needed reconstruction post excision. In patients with carcinoma breast, primary lump was excised under ultrasound guidance with 1 cm margin. Reconstruction following resection in OBS involves volume-displacement or volume-replacement techniques, which depend on breast size and lesion size/location. Specimen was Inked and sent for frozen to know margin status. All the patients with carcinoma breast underwent sentinel lymph node biopsy either through same incision or through a separate incision. If sentinel lymph node is positive, patients underwent complete axillary lymph node dissection.

Patients who underwent OBS were given the Questionnaire (BREAST-Q) directed specifically on satisfaction with breast cosmesis at one month postoperatively. Patient's other data (clinical, pathological, type of surgery etc.) was collected from patient records. All the patients with carcinoma breast were given adjuvant radiotherapy after wound was completely healed.

RESULTS

Median age of the patients was 48 years, a decade younger than the western population with breast cancer. 11 patients had lesion in right breast and 14 patients had lesion in the left breast (Table 1).

Table 1: Side of lesion.

Side of lesions	Number of patients
Right	11
Left	14

Table 2: Quadrant of lump in the breast.

Quadrant of lump in the breast	Number of patients
Upper outer quadrant	9 (36%)
Upper inner quadrant	4 (16%)
Central	6 (24%)
Lower outer quadrant	2 (8%)
Lower inner quadrant	1 (4%)
Involving all quadrants	3 (12%)

9 (36%) patients had lump in the upper outer quadrant, 4 (16%) patients had lump in the upper inner quadrant, 6 (24%) patients had lump in the central quadrant, 2 (8%) patients had lump in the lower outer quadrant, 1 (4%) patient had lump in the lower inner quadrant, 3 (12%) patients had lump involving all 3 quadrants (giant fibroadenoma) (Table 2).

Table 3: Histological type of the lump.

Histological type	Number of patients
Invasive ductal carcinoma	20 (80%)
Invasive lobular carcinoma	1 (4%)
Sarcoma	1 (4%)
Giant fibroadenoma	3 (12%)

Two patients had sentinel node positivity, so we proceeded with axillary lymph node dissection. No patient had margin positivity in both frozen and final histopathology. Final histopathology report showed 20 patients with invasive ductal carcinoma, 1 patient with invasive lobular carcinoma, 1 patient with sarcoma, and 3 patients with giant fibroadenoma (Table 3).

Table 4: Hormone receptor status.

Receptor status	Number of patients
Only hormone receptor positive (er, pr)	16 (76%)
Only her2neu positive	1 (4.7%)
Triple positive	2 (9.5%)
Triple negative	2 (9.5%)

Immunohistochemistry (IHC) of patients with carcinoma breast showed 16 patients with estrogen receptor (ER) and progesterone receptor (PR) positive, 1 patient with only Her2neu receptor positive, 2 patients showed triple positivity and 2 patients showed triple negative lump (Table 4). Elliptical mastopexy was the most commonly performed OBS in our institute (Table 5).

Table 5: Type of oncoplastic breast surgery technique.

Type of surgery	Number of patients
Elliptical	8
Crescent	3
Radial	2
Circum-areolar	3
Mini Ld flap	2
Wise pattern mammoplasty	1
Leteral intercostal artery perforator flap (LICAP)	2
Bat wing	1
Hemi batwing	1
V. mammoplasty	1
J. mammoplasty	1

Table 6: Cumulative response assessment of satisfactory scores (number of patients).

	Very satisfied (1)	Mildly dissatisfied (2)	Satisfied (3)	Highly satisfied (4)	Extremely satisfied (5)
Appearance in mirror with clothes	0	0	2	10	13
Appearance in mirror unclothed	0	1	6	7	11
Shape of breast with bra	0	0	1	10	14
Shape of breast without bra	0	1	4	9	11
Bra fit/comfort	0	0	1	8	16
Result of reconstruction	0	1	2	12	10
How normal breast looks	0	1	3	13	8
How normal breast feel to touch	0	2	3	7	13
Breast matched to each other	0	1	8	10	6
Pain/limitation of arm movement	0	2	2	8	13

Table 7: Final satisfactory score (number of patients).

Score	Number of patients
10 (very unsatisfied)	0
11-20 (mildly satisfied)	0
21-30 (satisfied)	1 (4%)
31-40 (highly satisfied)	9 (36%)
41-50 (extremely satisfied)	15 (60%)

Mean satisfactory score was 42.4 (highly satisfied), 5 out of 25 (20%) patients had responded with score 50/50. The patient with least score of 26/50, had undergone wise pattern mammoplasty for giant fibroadenoma and had nipple areola complex necrosis post-operatively. One patient who underwent lateral intercostal artery perforator flap (LICAP) had small Hematoma with 2×2 cm necrotic patch which was managed conservatively. One patient who underwent mini LD flap complained of on and off shoulder pain. No major complications noted in other patients. 6 out of 25 patients expressed fear of ipsilateral recurrence (Tables 6 and 7).

DISCUSSION

In our study 36% of patients were highly satisfied and 60% of patients were extremely satisfied, which is in line with previous studies. 84% of patients were satisfied or very satisfied in the report by Cecilia Dahlback et al.⁶ Patient ratings as “excellent” or “good” were reported by Johansen et al. in 73%, by Taylor et al in 87%, and by Cetintas et al in 84%. Snecuw et al reported a rate of “very satisfied” in 59% and “little satisfied” in 30%. Satisfaction score was a little higher in our study probably because of careful selection of patients and small sample size.⁷⁻¹⁰

Mean age of patients in our study is 48 years, age did not influence patient satisfaction in our study, this is in line with previous studies.⁷ Few studies hypothesis that a potential negative impact of higher age on aesthetic outcome could be cancelled by less favourable ratings from younger women, with possibly higher demands

regarding the aesthetic result. In a study by Cetintas et al, age greater than 50 years was shown to be a risk factor for poor aesthetic outcome when the evaluation of outcome was made by panel of observers but not when the patient evaluated the results.⁷ Few studies have shown a correlation between high excised specimen volume and worse aesthetic result. In our study we did not measure the excised volume and breast volume. In the study by Dahlback et al, has shown no influence of tumor sizes on outcome.⁶

In our study there is no influence of axillary dissection on outcome, which in accordance with study by Taylor et al but there is an increased chance of breast edema at 2 years postoperatively according to study by Beadle et al.¹¹ We have to do a follow up study in our patients to evaluate this. Another possible way for axillary clearance to impact the aesthetic outcome of the breast is if the axillary scar pulls the upper lateral quadrant up towards the axilla, which is not seen in 2 of our patients who had undergone axillary dissection.

Radiotherapy may impact the aesthetic outcome by influence on skin colour and changes in breast tissue such as increased breast fibrosis. several previous studies have shown and negative influence of radiotherapy on aesthetic results.⁹ We need to re-evaluate satisfactory scores post Radiotherapy. According to previous studies chemotherapy and hormonal therapy do not impact patient satisfaction.^{12,13}

CONCLUSION

OBS is emerging as standard of care in India for early breast cancer, although time taken is longer than west. Long term outcomes in Indian population are yet to emerge. Our results demonstrate a high satisfaction with breasts cosmesis in patients who underwent OBS. Further studies with large sample size, comparison with patients who underwent more radical procedures and follow up re-score after radiotherapy/chemotherapy/hormone therapy is needed.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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