Round block technique versus reduction mammoplasty in treatment of early breast cancery

Original Article

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ABSTRACT

Background: The majority of individuals who are diagnosed with breast cancer today have early breast cancer, which is characterized as having a mobile tumor within the breast with or without corresponding movable enlarged lymph nodes. The purpose of breast-conserving therapy, which has become the accepted standard of care for early-stage breast cancer, is to offer the benefit of a preserved breast together with a treatment that is just as successful as mastectomy.

Aim: The study compares the use of reduction mammography and the round block method in the treatment of early-stage breast cancer.

Patients and Methods: Thirty patients with an early diagnosis of breast cancer (T1 or T2, N0 or N1, M0) who were hospitalized to Ain Shams University Hospitals participated in this prospective controlled clinical trial. The patients were split into two groups: group I: 15 patients in this group are in the early stages of breast cancer (T1 or T2, N0 or N1, M0). Group II: This group consists of 15 patients (T1 or T2, N0 or N1, M0) with early-stage breast cancer.

Results: In our study, there was no significant statistical difference between the two groups regarding the patient's age, family history, and side of the lesion.

There was a significant difference, between the two groups as regards: Intraoperative blood loss, intraoperative time, hospital stay, postoperative complication, and cosmetic outcome.

Conclusion: Patients with early-stage breast cancer who have medium-sized breasts and no significant ptosis are candidates for both reduction mammoplasty and round block technique. Round block technique is better for these patients because it requires less experience from the surgeon and has fewer complications, which means radiation therapy would not be delayed, better cosmesis, and typically does not require contralateral breast surgery for symmetrization.

Key Words: Breast cancer, reduction mammoplasty, round block technique.

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INTRODUCTION

Early breast cancer can be defined as the presence of a mobile tumor within the breast with or without associated mobile enlarged lymph nodes and represents the vast majority of patients who present now with breast cancer[1].

With a survival rate similar to that of radical treatments, breast-conservation surgery (BCS) is a crucial part of early breast cancer treatment[2]. In fact, for patients with Stage 1 or Stage 2 breast cancer, the long-term survival of BCS with radiation is not significantly different from that of mastectomy[3].

Therapeutic reduction mammoplasty (TRM) is still a beneficial surgery among the primary technical choices. When TRM is used, the tumor is often removed, and the breast is remodeled utilizing an attractive breast reduction procedure. Due to the vascularization of rich breast tissue, the majority of TRM has predicated their planning on maintaining the nipple-areola complex (NAC) pedicle following tumor excision. For individuals with moderate to bigger breasts who require considerable tissue excision and contralateral symmetrization, the treatment is usually sufficient. More proportionate breasts can be achieved by using TRM to correct the BCS deficiency and enhance the preoperative look[4]. An inferior pedicle is utilized to transfer skin and parenchyma into the central defect in patients with central malignancies[5].

Two concentric periareolar incisions are made at the start of the treatment, leaving just a periareolar scar. This method can be used to relocate the NAC, depending on how far the new areola incision is from the outside incision. Since dermal arteries on both sides supply NAC, the dermis is only sliced on the side of the tumor in the initial round block technique (RBT). As a result, individuals with malignancies on the breast's periphery find it challenging to use this procedure[6].

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On the other hand, tumors in the outer regions of the breast can be removed via a modified round block technique (MRBT), which involves cutting the dermis on both sides. This was described by Zaha *et al*.[7]. Because the complete outer circle can be cut through to create a dermal flap, an excellent view can be achieved in situations when the breast excision region does not encompass the area beneath the NAC. Because of the excellent perspective, MRBT makes it simple to conduct breast contouring in addition to partial mastectomy. When a breast tissue excision was necessary under the NAC, we carried out the original RBT; in peripheral instances, where no such resection was necessary, we conducted the MRBT[7].

Aim

The study compares the use of reduction mammography and RBT in the treatment of early-stage breast cancer.

PATIENTS AND METHODS:

Thirty patients with an early diagnosis of breast cancer (T1 or T2, N0 or N1, M0) who were hospitalized at Ain Shams University Hospitals participated in this prospective controlled clinical trial.

Methods

Patients were subdivided into two groups

Group I: 15 patients with early-stage breast cancer (T1 or T2, N0 or N1, M0) make up this group. This group had the RBT procedure, which involved removing the mass with a safety margin and monitoring the wound to look for any signs of complications and assess the cosmetic result using sonomammography and clinical evaluation.

Group II: 15 patients with early-stage breast cancer (T1 or T2, N0 or N1, M0) make up this group. This group had reduction mammoplasty to remove the mass with a safety margin. They also had postoperative follow-up to look for any signs of complications and evaluate the cosmetic result using sonomammography and clinical evaluation.

Inclusion criteria

(a) Age: more than 18 years.

(b) Early breast cancer: T1 or T2, N0 or N1, M0.

(c) Patients candidate for breast conservation.

Exclusion criteria

(a) Contraindication for breast conservation.

(b) Patient's refusal.

(c) Tumor stage greater than T2N1 M0

History taking

Personal history: name, age, marital status, number of children, lactation history, history of contraception, menstrual history, and special habits.

Present history:

(a) Assessment of the swelling (e.g. onset, course, duration…. etc).

(b) Assessment of pain if present.

(c) Assessment of swelling in axilla if present.

(d) Assessment for nipple and skin changes if present (to be excluded from our study).

(e) Assessment of symptoms suggestive of metastasis (e.g. bone ache, marked weight loss, jaundice… etc) to be excluded from our study.

Menstrual and contraceptive history:

Family history: of breast cancer especially first-degree relative.

Past history: medical disease, surgical operations, and history of breast diseases (e.g. previous benign lump, bleeding per nipple).

Clinical Examination:

(a) General examination: general appearance, vital signs, body weight, systemic examination (head, neck, spine, chest, and abdomen).

(b) Local examination: (normal breast to be examined first to assess normal structure and sensation).

Breast examination as a whole assessing:

(a) Size, site, shape, and mobility of breast.

(b) Breast cup size and Degree of ptosis.

(c) Skin, nipple, and areolar changes.

Lump examination:

(a) Site, size, shape, surface, consistency, edge.

(b) Skin overlying for evidence of malignant invasion (e.g. skin ulceration, Peau d'orange, … etc) to be excluded from our study.

(c) Relation to surrounding tissues.

(d) Examination of axillary lymph nodes: look for enlarged lymph node and assess them as mentioned for swelling as regards mobility, site, and number.

Investigation:

I. Laboratory investigation:

(a) Complete blood count.

(b) Complete liver function.

(c) Coagulation profile (bleeding time, prothrombin time, and concentration).

(d) Kidney function tests.

(e) Fasting and postprandial blood sugar.

II. Radiological investigation:

i. Mammography:

All patients were subjected to bilateral mammography. Features on a mammogram suggestive of breast cancer as follows (Fig. 1):

(a) The general crab-like shape with disruption of the normal structure.

(b) Microcalcifications within the substance of the mass.

(c) Thickening of the skin over the lesion due to early edema.

ii. Breast ultrasound:

It helps in the differentiation between solid masses and cystic lesions, whether palpable or not palpable (Fig. 2).

iii. MRI breast or Contrast-enhanced mammography:

Now is mandatory investigation before breast conservation to detect multicentric tumor.

iv. Computed tomography chest and computed tomography abdomen and pelvis: searching for possible metastasis.

Biopsy:

All patients in this study were subjected to one of the following types of biopsy for the diagnosis of the type of tumor:

(a) Fine needle aspiration cytology (FNAC) (Figs 3).

(b) Excisional biopsy (Fig. 4).

(c) True-cut needle biopsy.

All these types of biopsies were sent for histopathological examination:

All patients in both groups included in our study were compared for:

Intraoperatively:

(a) Operative time.

(b) Blood loss.

(c) Intraoperative complication.

Postoperatively:

(a) 24-h drainage volume.

(b) Drainage days.

(c) Development of seroma after removal of drains.

(d) Estimating the total seroma volume, seroma rate, and number of seroma aspiration.

(e) Development of wound hematoma.

(f) Development of wound infection.

(g) Development of wound necrosis.

(h) Development of lymphoedema of the arm.

Preparation of the patients:

(a) Consent: written consent for modified radical mastectomy and the other operative risks from the patient or one of her close relatives was taken.

(b) Anesthetic consultation: to assess the patient's fitness for surgery.

(c) Prophylactic antibiotics were administrated to all patients routinely and immediately before the procedure (during premedication period).

(d) Nothing by mouth at least 6 h before the procedure.

(e) The patient lays supine with her arm on the operative side extended on an arm board.

Surgical Techniques:

(a) Group I: RBT with the removal of the mass with a safety margin and axillary clearance

(b) Group II: Reduction mammoplasty with the removal of the mass with a safety margin and axillary clearance

Operative technique

The round block mammoplasty

Two centripetal periareolar incisions are made at the beginning of the operation, and then the intervening skin is depigmented. To get access to the tumor, the outside edge of the de-epithelialized skin is cut, and the skin envelope as a whole may subsequently be compromised. Through its posterior glandular base, the NAC maintains its vascularization. An exterior and internal glandular flap is generated as a consequence of resectioning the lesion from the subcutaneous tissue down to the pectoralis fascia. The excision defect is then eliminated by mobilizing the flaps of the pectoralis fascia and moving them near each other. The two incisions are then approximated, leaving a periareolar scar (Fig. 5).

A distinct transverse incision made along the hairline, about 4-5 cm below the axilla's most superior aspect, served as the starting point for axillary dissection. The incision extends to the latissimus dorsi muscle posteriorly and to the lateral border of the pectoralis major muscle anteriorly. A plane of dissection was created along the inferior border of the axillary vein using the flat surface of the CS blade. All fat, lymphatics, and blood vessels were dissected off the axillary vein, sparing the long thoracic nerve and the thoracodorsal pedicle. The closure was secured to the skin with non-absorbable sutures, and a drain application was made.

**Superior pedicle reduction mammoplasty*

Preoperative drawings

Drawings are done preoperatively with the patient in an upright standing position (Fig. 6). The size of the tumor is outlined on the skin. A central midline is drawn from the sternal notch to the umbilicus. A vertical line is drawn from the midclavicular point to the nipple and this line is extended through the nipple to the inframammary fold and on the thoracic wall. Using the index finger the new position of the nipple is marked at the level of the original inframammary fold with this point projected anteriorly on the midclavicular line.

Technique

De-epithelialization of the region around the NAC is the first step in the process. After finishing, the NAC is separated from the breast tissue underneath. To feed blood to the NAC, a superior pedicle of dermoglandular tissue is kept intact.

After finishing the inframammary incision, the pectoral fascia is widely undermined, exposing more breast tissue. The undermining encompasses the medial and lateral sides of the breast, as well as the NAC, and begins inferiorly and moves superiorly beneath the tumor. The tumor is excised in its entirety, leaving a large margin of surrounding skin and normal breast tissue, as indicated by the preoperative marker.

All tissues excised are weighed and this provides a guide to the amount of tissue to be excised in any contralateral reduction procedure. As a general rule the resection of the cancer-bearing breast should be less than the opposite breast to allow for shrinkage of the treated breast following whole-breast radiotherapy (Fig. 7).

**Inferior pedicle mammoplasty technique*

Preoperative drawings

Preoperative drawings are completed when the patient is standing up straight. The sternal notch and the umbilicus form the center midline. The skin is marked with the location of the tumor and the breast tissue that will be removed along with it. The midclavicular point, the nipple, the inframammary fold, and the thoracic wall are all connected by a vertical line that is traced from there. The original inframammary fold is the place at which the nipple's new location is shown, and this point is projected anteriorly on the midclavicular line. With its apex located at the eventual nipple location, an inverted V is depicted. These places are connected to the V's peak by the two lines that make up the V. From the ends of the two inverted V lines, horizontal lines are formed, connecting medially and laterally to the inframammary fold. The inferior pedicle has a base width of 6–12 cm, which is indicated on the skin (Fig. 8).

Marks are on the new areola. The inferior pedicle is de-epithelialized and the skin is incised following the sketched marks. The pectoralis fascia is reached by dissecting skin flaps that are 1–2 cm thick in the superior, medial, and lateral directions. The inferior pedicle is dissected to expose the tumor and surrounding tissue. After the specimen is orientated, frozen slice analyses are carried out to assess the margin. With clips, the tumor bed is identified. With a base width of 6–12 cm and a thickness of 2–6 cm, the inferior pedicle is prepared. It is moved into the defect superiorly. the flaps began to shut in layers (Figs 9 and 10).

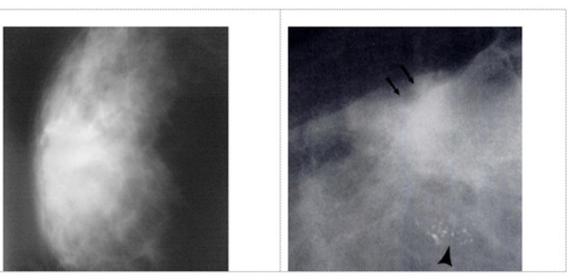

Fig. 1: (A) mammograms show disruption of the normal structure (Breast mass). (B) microcalcifications.

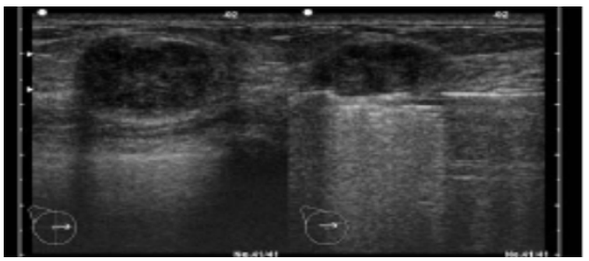

Fig. 2: Breast ultrasound (Breast mass).

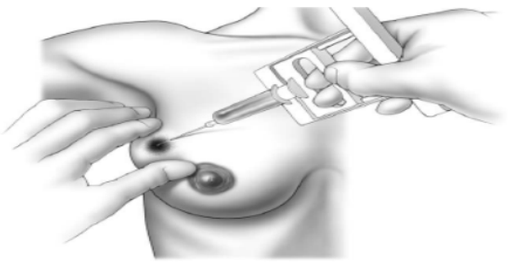

Fig. 3: Fine needle aspiration cytology.

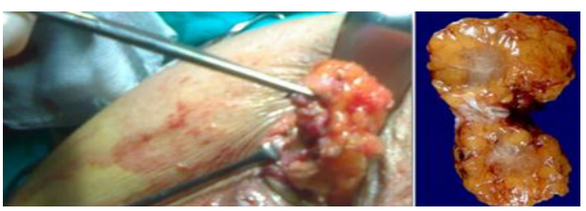

Fig. 4: Excisional biopsy.

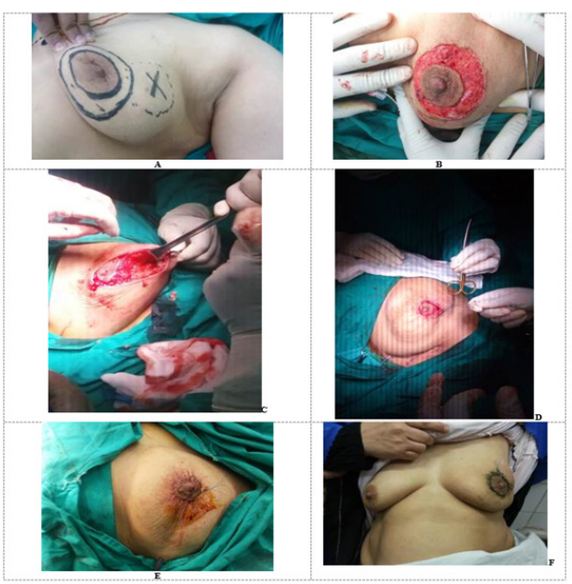

Fig. 5: Round block technique A. Preoperative drawings, B. De-epithelialization between outer and inner incision line, C. excision of the tumor, D. closure of the glandular defect, E. repositioning and suturing of NAC, F. postoperative result.

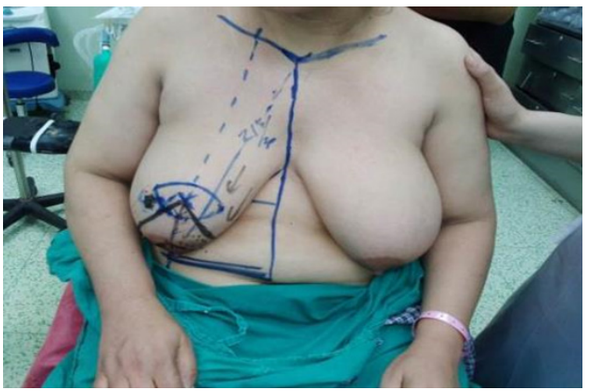

Fig. 6: Preoperative drawings for superior pedicle reduction mammaplasty.

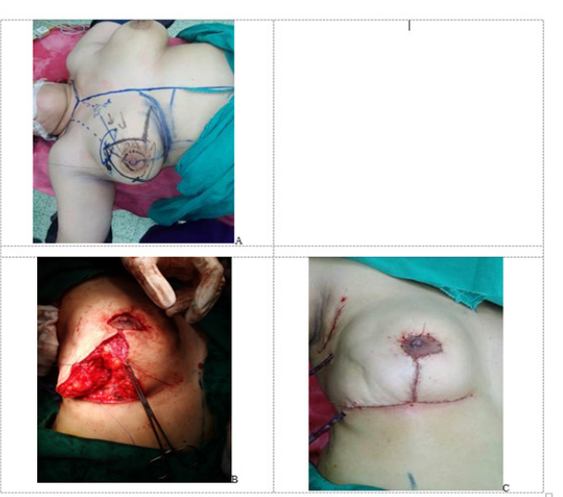

Fig. 7: Superior pedicle technique A. Preoperative skin markings, B. The skin is closed, C. Immediate postoperative result.

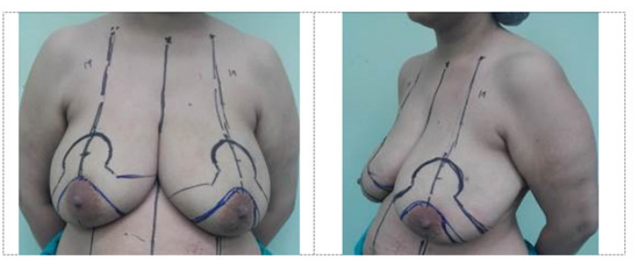

Fig. 8: Marking skin for inferior pedicel flap design.

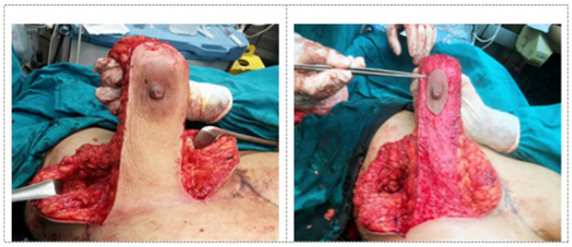

Fig. 9: De-epithilization of inferior Pedicaled flap.

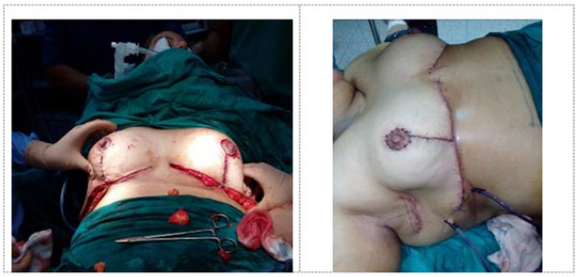

Fig. 10: Immediate postoperative result of inferior flap.

Patients were assessed intraoperatively for:

(a) Operative time.

(b) Blood loss.

Postoperatively patients were assessed for:

1st day post	Drainage volume, Hematoma, flap congestion or ischemia
Within 1st week	Drainage volume and days, seroma, wound infection, skin/nipple sloughing and flap necrosis
After 1 month	Scar fibrosis/dimpling and flap necrosis
Every 3 months up to 1 year	Doppler u/s and mammogram
	Aesthetic outcome by patient and surgeon satisfaction

Aesthetic outcome was assessed on a subjective basis according to patient and surgeon satisfaction.

By asking a simple question for patients which was are you satisfied with the result of the operation or not as regarding the final shape?

As for the surgeon ask are you satisfied with the result of the operation regarding the oncological safety and final shape or not?

Statistical methodology

Analysis of data was done by IBM computer using SPSS (Statistical analysis was done using IBM SPSS statistics for windows, Version 26.0. Armonk, NY: IBM Corp) as follows:

(a) Description of quantitative variables as mean, SD, and range.

(b) Description of qualitative variables as N and %.

(c) χ^2 test was used to compare qualitative variables.

(d) Unpaired t test was used to compare two groups as regards quantitative variable.

(e) Paired t test was used to compare quantitative variable in the same group.

P value greater than 0.05 insignificant.

P value less than 0.05 significant.

P value less than 0.01 highly significant.

RESULTS:

Data obtained from history, clinical examination, and investigations was interpreted as the following preoperative findings:

The age of the patient

Patients in groups I and II (RBT and reduction mammoplasty) varied in age from 30 to 62 years with a mean age of 47 and 30–64 years with a mean age of 43, respectively (Table 1). Regarding age, there was no statistically significant difference between the two groups.

Family history

As regarding family history there was no significant statistical difference between the two groups. In group (I) (RBT), 13 patients had no family history, two had a history from their mothers, and In group (II) (Reduction mammoplasty), 14 patients had no family history, one had a history from her grandmother (Table 2).

Comorbidities

On preoperative patient preparation, full history taking and full labs are done, in group (I) (Round block) three patients among the 15 patients were found to have medical comorbidities. One patient have diabetes mellitus, one patient have hypertension and one patient have mediterrian fever.

In group (II) (Reduction mammoplasty) four patients among the 15 patients were found to have medical comorbidities. Two patients have diabetes mellitus and two patients have hypertension.

There was no significant difference between the two groups as regards the patient's comorbidities (Table 3).

Before the operation, seven patients were consulted to the internal medicine and cardiology departments, respectively, and their recommendations were fulfilled.

Side of the tumor

Thirteen cases included the left breast, seven in group I and six in group II, whereas, 17 cases involved the right breast, eight in group I (RBT) and nine in group II (reduction mammoplasty) (Table 4). Regarding the tumor's side, there was no statistically significant difference between the two groups.

Site of the tumor

Regarding the tumor location, there was no statistically significant difference seen between the two groups. As the most prevalent site of breast tumors, the upper outer quadrant still accounts for 60% (18 instances) of all cases in both groups, with 8 cases in group I (RBT) and 10 cases in group II (reduction mammoplasty). The remaining sites are arranged as follows: three in the upper inner quadrant and four in the lower inner quadrant of group (I). Moreover, four in group (II) lower inner quadrant and one in the upper inner quadrant (Table 5).

Intraoperative finding

Operative time

The operational times for the two groups were significantly different, with group (I) (RBT) requiring less time than group (II) (reduction mammoplasty). Group I's operating time ranged from 2 to 3.5 h, with a mean duration of 2.8 h, whereas group II's operative time ranged from 4 to 5.5 h, with a mean time of 4.65 h (See Table 6).

Blood loss

In terms of intraoperative blood loss, group (I) (RBT) experienced less loss than group (II) (reduction mammoplasty), with a statistically significant difference. Similar to group (I), blood loss in group (II) ranged from 100 to 300 ml with a mean loss of 200 ml, and in group (I) from 50 to 150 ml (Table 7).

Contralateral symmetrization

Contralateral breast surgery was done in the other breast for symmetrization. In group (I) (RBT) no patients have done contralateral surgery due to patient's refusal while in group (II) (Reduction mammoplasty) 11 patients have done contralateral surgery for symmetrization.

There was a significant statistically difference between the two groups regarding a number of patients that have had contralateral surgery due to reduction mammoplasty causing a discrepancy in the size of the breast while RBT does not cause this discrepancy, and this increase time of the operation, blood loss, and morbidity (Table 8).

Postoperative findings

Drainage volume

In group (I) (RBT), the total drainage volume ranged from 50 to 150 ml with a mean of (93), whereas in group (II) (reduction mammoplasty), it ranged from 100 to 300 ml with a mean of (226). Regarding the overall drainage volume, there was a statistically significant difference between the two groups, with group (II) having a higher total than group (I) (Table 9).

Drainage days

In both groups, the drains were removed usually when the discharge became less than 30 ml/day, there was a significant statistical difference between both groups as the drain was removed in the 1–2 postoperative days in group (I) (RBT) while it was longer in group (II) (Reduction mammoplasty) as drain removed in the 1–3 postoperative days (Table 10).

Hospital stay

As regards the hospital stay, in group I (RBT), the patient stayed from 1 to 2 days postoperative, and in group II (Reduction mammoplasty), from 1 to 3 days. There was a significant statistical difference between both groups being longer in group (II) (Reduction mammoplasty) (Table 11).

Final pathological diagnosis

In group (I) (RBT), invasive duct carcinoma (IDC) was diagnosed in 14 patients, and invasive lobular carcinoma in one patient. In group (II) (Reduction mammoplasty), (IDC) was in 15 patients. There was no significant statistical difference as regarding final pathological diagnosis in both groups (Table 12).

Cosmetic outcome

Cosmetic outcome was estimated using a scoring system which was made up from the three independent grading parties (Surgeon, Patient, and MDT of the breast) based on the level of satisfaction to give an overall score for cosmetic outcome.

The cosmetic outcome score was based on multiple items that made up a checklist to be evaluated by our team and the MDT of the breast for every single case, this checklist: the overall shape of the breast, the symmetry of both breasts, the site and direction of the nipple, the volume of the breast and the skin incision shape.

The following is the number of cases for each Grade of the scoring system for the whole study (Table 13).

In group (I) (RBT), there were 12 cases with an excellent score, 3 cases with a good score, and 1 case with a poor score. In group (II) (reduction mammoplasty), there were 4 cases with an excellent score, 6 cases with a good score, 4 cases with a fair score, and 1 case with a poor score.

Due to reduced scarring and fewer wound complications, group I (RBT) had a superior cosmetic outcome than group II (reduction mammoplasty). This difference was statistically significant (Fig. 12).

As regards oncological safety all of our patients had clear margins in frozen sections taken during the operations and postoperative paraffin section results provided by our pathologist and none of them had recurrence during the postoperative follow-up period of 2 years duration.

There was a significant difference, between group (I) and group (II) as regards:

(a) Intraoperative blood loss.

(b) Intraoperative time.

(c) Contralateral surgery.

(d) Hospital stay.

(e) Postoperative complication: Wound dehiscence and flap necrosis.

(f) Total drainage volume.

(g) Drainage days.

(h) Cosmetic outcome: patient satisfaction and surgeon satisfaction.

Table 1: Age difference between the two groups

	Groups		*T* test	
Age	Round block	Reduction mammoplasty	t	*P* value
Range	30–62	30–64	1.462	0.155
Mean±SD	47.40±8.42	43.07±7.81		

Table 2: Family history in the two groups

	Round block technique *N*=15	Reduction mammoplasty *N*=15	Test value	*P* value	Significance
FH, *n* (%)					
Negative	13 (86.7)	14 (93.3)	0.370*	0.543	NS
Positive	2 (13.3)	1 (6.7)			

Table 3: Comorbidities in the two groups

	Round block technique *N*=15	Reduction mammoplasty *N*=15	Test value	*P* value	Significance
Co-morbidities, *n* (%)					
Negative	12 (80.0)	11 (73.3)	0.186*	0.666	NS
Positive	3 (20.0)	4 (26.7)			

Table 4: Side of the tumor in the two groups

Side	Round block *N* (%)	Reduction mammoplasty *N* (%)	Total *N* (%)
RT	8 (53.3)	9 (60.00)	17 (56.6)
LT	7 (46.7)	6 (40.00)	13 (43.3)
Total	15 (100.00)	15 (100.00)	30 (100.00)
Chi-square			
X^2		0.136	
P value		0.713	

Table 5: Site of the tumor in the two groups

Site of the tumor	Round block *N* (%)	Reduction mammoplasty *N* (%)	Total *N* (%)
UOQ	8 (53.00)	10 (66.7)	18 (60.00)
LIQ	4 (26.7)	4 (26.7)	8 (26.6)
UIQ	3 (20.00)	1 (6.7)	4 (13.3)
Total	15 (100.00)	15 (100.00)	30 (100.00)
Chi-square			
X^2		1.222	
P value		0.543	

LIQ, lower inner quadrant; UIQ, upper inner quadrant; UOQ, upper outer quadrant.

Table 6: Difference in the operative time in the two groups

	Groups		*T* test	
Operative time (h)	Round block	Reduction mammoplasty	T	*P* value
Range	2–3.5	4–5.5	–9.133	<0.001*
Mean±SD	2.83±0.49	4.65±0.60		

Table 7: Intraoperative blood loss in the two groups

	Groups		*T* test	
Blood loss	Round block	Reduction mammoplasty	T	*P* value
Range	50–150	100–300	–5.537	<0.001*
Mean±SD	100.00±37.80	203.33±61.61		

Table 8: Contralateral breast symmetrization in the two groups

	Round block technique *N*=15	Reduction mammoplasty *N*=15	Test value	*P* value	Significance
Contralateral surgery, *n* (%)					
Negative	15 (100.0)	4 (26.7)	17.368*	0.000	HS
Positive	0	11 (73.3)			

Table 9: Total drainage volume in the two groups

	Groups		*T* test	
Drainage VOL (ml)	Round block	Reduction mammoplasty	T	*P* value
Range	50–150	150–300	–7.734	<0.001*
Mean±SD	93.33±35.94	226.67±56.27		

Table 10: Drainage days in the two groups

	Groups		*T* test	
Drainage days	Round block	Reduction mammoplasty	T	*P* value
Range	1–2	1–3	–3.035*	<0.001*
Mean±SD	1.53±0.52	2.20±0.68		

Table 11: Hospital stay in the two groups

	Groups		*T* test	
Hospital stay (days)	Round block	Reduction mammoplasty	T	*P* value
Range	1–2	1–3	–2.477	<0.001*
Mean±SD	1.67±0.49	2.20±0.68		

Table 12: Final pathological diagnosis in both group

Final diagnosis	Round block *N* (%)	Reduction mammoplasty *N* (%)	Total *N* (%)
IDC	14 (93.3)	15 (100.00)	29 (96.6)
Mammary carcinoma	1 (6.7)	0	1 (3.3)
Total	15 (100.00)	20 (100.00)	30 (100.00)
Chi-square			
X^2		1.034	
P value		0.309	

Table 13: Number of cases for every score of cosmetic outcome

	Round block technique *N*=15, *n* (%)	Reduction mammoplasty *N*=15, *n* (%)	Test value*	*P* value	Significance
Cosmetic outcome					
Poor	0	1 (6.7)	10.000	0.019	S
Fair	0	4 (26.7)			
Good	3 (20.0)	6 (40.0)			
Excellent	12 (80.0)	4 (26.7)			

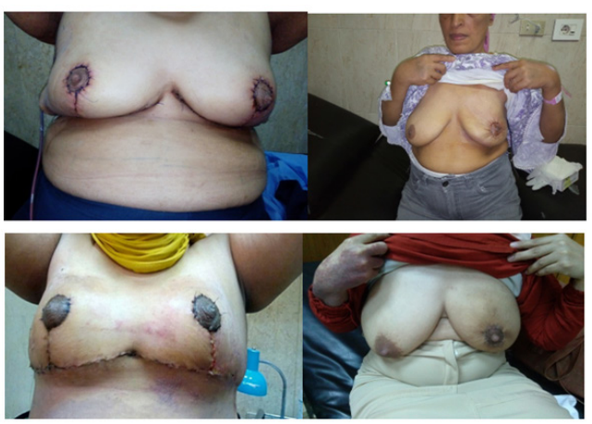

Fig. 12: Postoperative cosmetic outcome in the two groups.

DISCUSSION

For the majority of women with early-stage breast cancer, BCS is proven to be a safe alternative[2].

In fact, in patients with Stage I or II breast cancer, the 5-year survival of BCS with radiotherapy does not vary significantly from mastectomy alone[3].

These operations often involve lumpectomy and quadrantectomy. A large excision, encompassing the skin and underlying muscular fascia, is often carried out during a quadrantectomy. The goal of a lumpectomy is to remove the tumor with negative surgical margins and without removing any skin[3].

Even though it is acknowledged that primary closure may be used to control the majority of BCS abnormalities, the cosmetic result can be unexpected and often results in an undesirable outcome[8].

Since the rapid application of plastic breast surgery techniques allows for a greater local excision while still meeting the aims of improved breast form and symmetry, oncoplastic operations have garnered more interest. To achieve both clinically sound and aesthetically acceptable outcomes, contemporary oncoplastic breast surgery integrates the concepts of both plastic and oncologic surgery. Consequently, the surgeon meets the patient's demands both aesthetically and guarantees that oncologic principles are upheld by using personalized approaches[4].

Generally speaking, oncoplastic methods include volume displacement or replacement surgeries, and occasionally they involve contralateral breast surgery. Local flaps, reduction mammaplasty/mashopexy methods, and latissimus dorsi myocutaneous flaps are the most often used treatments[4].

Furthermore, the oncoplastic approach might start weeks (delayed-immediate), months to years later (delayed), or at the time of BCS (immediate). The criteria are based on the surgeon's experience and the extent of the defect in comparison to the size of the remaining breast, even if there is no agreement on the optimal method. The primary benefits of the employed approach need to be its repeatability, minimal disruption to the oncologic therapy, and extended outcomes. Most likely, no single method can accomplish all of these objectives, and every methodology has benefits and drawbacks[4].

A comprehensive preoperative examination including the plastic surgeon and breast oncologic surgeon is required.

By informing the patient about the expected

reconstruction of the defect and whether or not they qualify for breast conservation therapy, the breast oncologic surgeon will be able to establish the volume and location of the breast that has to be removed. For certain individuals with locally advanced breast cancer, neoadjuvant chemotherapy may be an option.

Large tumors may be easier to remove with the prospect of substantial tissue rearrangement by oncoplastic procedures, thus opening the door to breast conservation for patients who would have otherwise needed a mastectomy[9].

We split the research sample into two groups and compared the effectiveness of reduction mammoplasty (group II) and RBT method (group I) in the treatment of breast cancer.

The age of the patients in our study did not show a significant statistical difference between the two groups; nevertheless, our patients were younger than those in previous studies, with average ages of 47 (30–62 years) and 43 (30–64 years). Family history, including two (40%) and one (30%) first-degree relatives. The right breast accounted for 53.3 and 60% of the lesion (mass) in groups I (RBT group) and II (reduction mammoplasty group), respectively.

In 60% of instances, the tumor was located in the upper outer quadrant for both groups. In groups (I) and (II), the histopathological report was IDC for 14 and 15 patients, respectively. Such findings were also found in other studies by Huang *et al*.[10] in the reduction mammoplasty group, where the average age was 50 years (31–70 years), and by Geok-Hoon *et al*.[11] in the round block group, where the average age was 49 years (30–70 years).

Denewer *et al*.,[12], 40% of patients in the reduction mammoplasty group had breast tumors located in the superior external quadrant. In a research including 11 individuals, Geok-Hoon *et al*.[11] reported IDC. Denewer *et al*.[12], in a trial of 50 patients, reported IDC in 44 patients (reduction mammoplasty group), and in nine patients in the RBT group.

Regarding intraoperative blood loss, operational time, postoperative complications, drainage volume and days, hospital stay, and cosmetic success as measured by patient and surgeon satisfaction, there was a statistically significant difference in both groups. In several research, this was equivalent to and similar to the following:

Regarding the length of the operation and blood loss, group II (the reduction mammoplasty group) in our research had a longer operation and higher blood loss compared with group II, which had mean (SD): 2.83(2.83) h, and 50–150 ml (average 100 ml), and group I (RBT group) with mean (SD): 4.65 (4.65) h, and 100–300 ml (average 203.3 ml).

In group I, the mean operation time was found to be 3 h (range 188–191 min) by Okawa *et al*.[13] in a research including 18 patients (RBT group). In a research including 82 patients, Emirolgu *et al*. found that the reduction mammoplasty group's average operating duration was 2.5 h (with a range of 80–190 min).

According to Ogawa *et al*.[13], the typical length of stay in the hospital was 6 days, with a range of 2 to 12./ the duration of stay for oncoplastic patients [mean (SD): 5.1 (2.7) days.Our research revealed that group I (round block group) had a mean hospital stay of 1.6 days (range 1–2 days), while group II (reduction mammoplasty group) had a mean hospital stay of 4.8 days (1–3 days).

As regarding postoperative complication early and delayed

Emirolgu *et al*.,[12] The overall percentage of complications after 82 individuals had Oncoplastic Reduction Mammoplasty was 12.2% (10/82). Three (11.4%) patients had seroma, two developed wound site infections, four experienced wound dehiscence, and one experienced areola necrosis. According to Huang *et al*.[10], four of the 18 patients who underwent the Oncoplastic Round Block procedure experienced partial NAC blood flow deficit.

According to Denewer *et al*.[14], out of 50 patients who had oncoplastic reduction mammoplasty, four experienced wound dehiscence, and two experienced partial areolar necrosis.

Patients in our study experienced some complications, which were almost identical to those in other studies. In group I, the overall rate was 16.6% (5/30) compared with 43.3% (13/30) in group II. In group II (the reduction mammoplasty group), there were two (13%) patients who had hematomas and three (20%) patients who had lymphaedema. Four (26.7%) patients in group II had partial skin/nipple sloughing, and five (33%) patients developed wound dehiscence.

In our study, we reported the cosmetic outcome based on the subjective satisfaction of the surgeon and the patient with the final form of the breast. We observed that, when compared with an untreated breast, the cosmetic outcome was 26.7% great, 40% good, 26.7% fair, and 6.7% bad. In the reduction mammoplasty group (II).

In group (I) (the RBT group), the cosmetic result received ratings of outstanding in 80% of cases and good in 20%.

According to Denewer *et al*.[14], 64% of patients in the reduction mammoplasty group had great cosmetic outcomes, 30% had acceptable results, and 6% had fair results. A 99% of Geok-Hoon *et al*.[11], in the RBT, regarded the cosmetic outcome as excellent or good.

We did not include oncological outcomes in our analysis, such as the formation of distant metastases, the rate of local recurrence, or the 5-year survival rate, because they required long-term monitoring.

In summary, patients with early-stage breast cancer who have medium-sized breasts and no significant ptosis are candidates for both reduction mammoplasty and RBT. RBT is better for these patients because it has lower morbidity and complications, which means radiation therapy would not be delayed, and it improves cosmesis. It also typically does not require contralateral breast surgery for symmetrization, whereas reduction mammoplasty requires more experienced surgeons.

CONCLUSION

In conclusion, oncoplastic surgery provides a new tool for the treatment of breast cancer because it allows for the excision of a much larger volume of breast tissue and the achievement of wider surgical margins, particularly for larger tumors, with better cosmetic results than standard resection, which can result in both tumor-involved surgical margins and poor cosmetic outcomes. Patients with early-stage breast cancer who have medium-sized breasts and no significant ptosis are candidates for both reduction mammoplasty and RBT. RBT is better for these patients because it requires less experience from the surgeon and has fewer complications, which means radiation therapy would not be delayed, better cosmesis, and typically doesn't require contralateral breast surgery for symmetrization.

CONFLICT OF INTEREST

There are no conflicts of interest.

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