



The Main Topics at the Oncoplastic Breast Surgery Course and Expert Panel

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ABSTRACT

The Oncoplastic and Reconstructive Breast Surgery course was held in İzmir by the İzmir Breast Diseases Federation in collaboration with the Breast Diseases Federation of Turkey. The techniques of oncoplasty, the application details and experience in this subject were shared. In this text, the main topics and outcomes are briefly summarised. These evaluations can be considered highly valuable on both local and regional scales.

Keywords: Oncoplastic breast surgery, quadrantectomy (surgery for breast cancer based on tumour location), breast surgery

Introduction

The 3rd Oncoplastic and Reconstructive Breast Surgery Course was organized by the İzmir Breast Diseases Association on May 21, 2016 in co-operation with the Association of Breast Diseases Federation of Turkey. Eighty seven speakers and the participants from 17 different cities deliberated on the issue during a full-day course between 8:30 and 18:30. Experienced specialists demonstrated their own approaches with a plethora of visual material (photos, videos etc.). Participants included Mustafa Emiroğlu, M. Kemal Atahan (İzmir), Bekir Kuru (Samsun), M. Ali Gülçelik (Ankara), Atakan Sezer (Edirne) as the board directors of the course and Bahadır Güllüoğlu (İstanbul) as the course consultant. Oncoplastic techniques, methods and experience in breast cancer surgery were described in detail. The main topics and messages are summarized briefly in this paper, and the assessment made on this subject Turkey is considered to be an important local and regional scale.

The status and development of oncoplastic and reconstructive breast surgery in the world and Turkey in relation to surgeons who have been working on this issue were explained briefly. Practices carried out in Turkey are almost parallel to the developments in the world. In this regard, the experience and practices about this issue must be shared with a wider community via literature. It was stressed that multi-centre studies on oncoplastic breast surgery were needed. A consensus was achieved on the requirement for general certification programs in this area to be formed by a commission planned to be constituted by oncoplastic and reconstructive surgeons among general surgeons and plastic surgeons. The importance of all aspects of the oncoplastic and reconstructive breast surgery (ORBS) was highlighted. Please see the Table 1 for details of the evaluation of oncoplastic breast surgery.

Oncoplastic breast surgery

Breast cancer surgery made progress within the last century from radical mastectomy to oncoplastic breast surgery. In 1980s, MCS revolutionized the field. In 2000s, oncoplastic breast surgery (OBS) was announced as an innovation in breast surgery. In fact, breast cancer surgery treatment is available in most of the cases in the form of standard breast aesthetics incisions without the need for oncoplastic techniques. However, one out of 4-5 patients had to undergo an aesthetical oncoplastic procedure after MCS. Therefore, surgical planning in addition to an overall assessment has gained a great deal of importance. Advanced planning before surgery is considered to be skipped by surgeons most of the time. Loss of breast tissue by more than 20% (loss of inner quadrants 10%) can lead to aesthetic problems. The importance of oncoplastic techniques are emphasised for future use. The application of these techniques simultaneously applied with lumpectomy ensures higher patient satisfaction and increases the quality of life. The simultaneous procedures were specifically discussed with high emphasis during the course.

Oncoplastic incisions are intended to prevent any defects after breast surgery. Up until recent years, it has been believed that incisions placed in parallel on both sides of maximum remaining skin tension lines (Kraissl's lines) and in the same orientation as collagen fibres (Langer's lines) are the most suitable incisions.

Table 1. Checking the elements required for the ORBS

| | Before surgery | Pre-operative | After surgery |
|---------|--|--|---|
| Patient | Age, height, weight, DM, DVT, smoking history, HT, BMI, donor site (chest – abdominal wall and back), approach to the other breast | - | Expectations, compliance, complications |
| Tumor | stage, biology, DCIS (\pm), size, distance to skin and nipple | Pathological examination (limit the frozen slices) | Oncological results |
| Breast | Density, size, shape, ptosis, areola status, skin quality, assessment of the other breast, possible breast defect analysis | To be drained, symmetry | Aesthetic results |
| Surgeon | Multidisciplinary assessment, photo, experience level | Photo, experience | Photo, documentation, follow |

HT: hypertension; DM: diabetes mellitus; BMI: body mass index; DCIS: ductal carcinoma; ORBS: oncoplastic and reconstructive breast surgery

Table 2. The proposed oncoplastic techniques according to breast quadrants

| Location of the tumor | Small breast and medium sized breast - droopy (-) | Small breast and medium sized breast - droopy (+) | Big breast |
|---------------------------------------|--|---|--|
| Upper-outer quadrant | Elliptical radial incision Half bat incision (side) Round block incision Racket incision Glandular flap Lateral thoracodorsal Flap LD TRAM | Circumference incision of nipple Elliptical radial incision Half bat incision (side) Round block incision Racket incision Glandular flap Benelli mastopexy Lateral thoracic flap LD | OBR (lower, double pedicle) Elliptical radial incision Batwing incision Racket incision Lateral thoracodorsal flap Glandular flap |
| Upper-middle and upper-inner quadrant | Breast head circumference incision Crescent incision Batwing incision Half-batwing incision (inside) Round block incision Glandular flap Parallelogram incision Rotation flap LD | Breast head circumference incision Crescent incision Batwing incision Half-batwing incision (inside) Round block incision Glandular flap Benelli mastopexy Rotation flap | OBR (lower, double pedicle) Crescent incision Batwing incision Glandular flap Rotation flap |
| Central area | Round block Grisotti flap Central triangular incision Total excision-primary closure Glandular, dermoglandular flaps | Round block Benelli Grisotti flap | OBR Grisotti reduction |
| Lower-outer quadrant | Lateral thoracodorsal flap Glandular, dermoglandular flaps Thoraco- epigastric flap TRAM | Round block Glandular, dermoglandular flaps Mastopexy techniques Volume filling techniques from chest wall | OBR (upper, upper-inner, upper-outer pedicle) Lateral thoracodorsal flap |
| Lower-inner quadrant | Inframammary incisions Triangular incision Dermoglandular incision Volume filling techniques (from thoracodorsal space) | Inframammary incisions Triangular incision Dermoglandular incision Volume filling techniques (from thoracodorsal space) | OBR (upper, upper-inner, upper-outer pedicle) Dermoglandular flaps Rotation flap |
| Lower-middle quadrant | Rotation flap Vertical OBS incisions Triangular incision Reverse- T incision | Rotation flap Vertical OBS incisions Triangular incision Reverse- T incision | OBR (upper, upper-middle, upper-outer pedicle) Vertical OBS incisions |

OBS: oncoplastic breast surgery; OMR: oncoplastic breast reduction; LD: Latissimus dorsi flap;

TRAM: transverse rectus abdominis myocutaneous flap

Table 3. Participants as speakers, panelists and chairpersons in the ORBS meeting

| | | |
|---------------------------------|-----------------------------------|-----------------------------|
| Mustafa Emiroğlu (İzmir) | Bekir Kuru (Samsun) | Kemal Atahan (İzmir) |
| Bahadır Güllüoğlu (İstanbul) | Atakan Sezer (Edirne) | M. Ali Gülçelik (Ankara) |
| Zafer Cantürk (Kocaeli) | Serdar Özbaş (Ankara) | Serdar Saydam (İzmir) |
| Cihangir Özaslan (Ankara) | M. Ali Koçdor (İzmir) | Lutfi Doğan (Ankara) |
| Cem Karaali (İzmir) | Hedef Ozun (Aydın) | Teoman Coşkun (Manisa) |
| Serhan Tuncer (Ankara) | Gürsel R. Soybir (İstanbul) | Belma Koçer (Sakarya) |
| Hasan Karanlık (İstanbul) | Güldeniz Karadeniz (Zonguldak) | Levent Yeniay (İzmir) |
| Ercüment Tarcan (İzmir) | Cem Yılmaz (İstanbul) | Aykut Soyder (Aydın) |
| Neslihan Cabioğlu (İstanbul) | Senem Alanyalı (İzmir) | Murat Tüzüner (İzmir) |

However, Aronowitz curvilinear horizontal incisions cause tension on the breasts, prevent the enlargement of the breast skin, and cause the breast tissue to collapse in certain areas while polarising upper quadrant, and so is considered as an outdated method in recent years. The radial incisions following the growth lines of the breast are thought to be more beneficial than the former method. In addition, it was noted that the Batwing and Benelli incisions were suitable for Langer and Kraissl lines; tennis racket in upper-out quadrant, vertical and reverse T in low-in quadrant; and radial rotation flap incision in inner quadrants are also suitable for the tension lines of the breast as defined by Aronowitz.

Speakers said that the glandular and dermoglandular flap techniques should be used widely and the area of lumpectomy should be filled in a way that prevents the development of seroma. The traditional way of waiting until the lumpectomy area filling with seroma is found outdated and abandoned. These techniques should be applicable in all the quadrants of the breast especially in the upper breast.

Oncoplastic breast surgery is not a standard approach; it can be modified for each patient in various ways. Sometimes, an open surgical area is found to be an interesting and creative technique. Thoracodorsal and/or epigastric tissue volume filling techniques are recommended for any possible defects in the external quadrants.

It was emphasized that vertical mastopexy had become very popular in breast reduction surgery in recent years. Lumpectomy and oncoplastic surgery could be done in various quadrants of the breast with this technique. It is recommended for the cases in which the volume of the breast is less than 1200 cc.

Application of the Grisotti flaps is recommended in the central tumors where it is necessary to remove the areola and head of the breast for security. And the benefits of Grisotti flap were underlined. The importance and facilitations of implementing of Benelli mastopexy were assessed in medium-volume and droopy breasts.

Breast volume and the tumor-to-breast-volume ratio are mostly debated in breast surgery. Therefore, it is highlighted in this course that the volume of breast should be measured. Oncoplastic breast reduction is defined as the oncoplastic breast surgery technique that is frequently applied in the world and in Turkey. Issues of dose distribution in radiotherapy, aesthetic issues after treatments and macromastia could be resolved surgically with a single operation by this technique. It is a major surgical operation with a significant learning curve. It should not be attempted without full knowledge of at least 5 to 6 techniques. It is highlighted that this technique brings extremely high patient-satisfaction when applied as a two-sided technique.

The endoscopic breast surgery was described in detail by its sole representative in Turkey. This operation is applied in breasts that are droopy and not very big. This technique inspires hope for surgery in the medium and long terms, although it was underlined that there was a significant learning curve during the course.

Breast reconstruction techniques

Although latissimus dorsi (LD) muscle flap lost its popularity due to the high morbidity rates, it is still in use for the patients with small breasts in Turkey as an operation of out-quadrant tumours either on its own or in combination with silicone implants. It is highlighted that we should recommend a new breast construction after mastectomy. The transverse rectus abdominus myocutaneous flap (TRAM) technique can be applied in patients that have adequate abdominal tissue. It is stressed that this technique is a major surgical operation with a significant learning curve. The patients found this technique to be more comfortable in the medium and long terms.

The participating breast surgeons discussed the silicone implant applications performed simultaneously with mastectomy. In recent years, mastectomy rates have increased in breast cancer treatment and reconstruction applications are also performed simultaneously. Silicone implant usage is increased rapidly due to the surgeons' and patients' comfort and ease-of-use of these implants. The protection of the lower breast fold affects the implant application positively and brings about aesthetic results.

A careful marking of the tumor bed is recommended for radiotherapy in oncoplastic breast surgery. In this regard, it is important to co-operate with the radiation oncologist. In recent years, reconstruction techniques applied simultaneously with mastectomy have become more and more popular. There is now a stronger opinion about the application of silicone before radiotherapy. It is specified that the complications of oncoplastic and reconstructive breast surgery do not create serious oncologic problems. They do not delay the adjuvant therapy. In the event of a positive assessment of the pathological border, re-excision can be done.

The highlights in the oncoplastic approach panel according to the breast quadrants

Multi-disciplinary assessment including the plastic surgeon is recommended in the treatment of breast cancer. The importance of the patient, breast, tumor features and the experience of the surgeon were discussed in relation to the implementation of these techniques. The importance of assessment before surgery was underlined by all the panelists. Who should perform these techniques? The importance of and the need for certification training were emphasized especially in the discussion section. In this context, the situation in Turkey was discussed in detail and the efforts made towards new developments were

distinguished, as well. Breast surgeons that attended and completed the courses can perform these operations.

Some of the speakers on the panel suggested that mastectomy and OBS should be differentiated from each other. Breast surgery technique selection constituted an important section of the panel discussions. OBS recommendations of the experts participating in the panel are summarized in Table 2. Table 3 shows the panelists, speakers and presidents of the sessions.

Discussion and Conclusion

ORBS techniques demonstrate a significant growth in Turkey. Also, training and certification are very important in ORBS. We should offer patients breasts without defects, not excellent breasts. If the patients do not have very high expectations, it will increase their compliance after surgery.

OBS is an approach that treats the patient, not the disease. OBS increases the role of surgeons. There are important efforts concentrated on learning and the implementation of these techniques among surgeons.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - M.E.; Design - B.K., M.E.; Supervision - B.G.; Funding - C.K.; Analysis and/or Interpretation - M.A.G., K.A., A.S.; Literature Review - M.E.; Writing - M.E.; Critical Review - B.G.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.