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Oncoplastic Breast Surgery; Is It Possible to Perform It in Every Medical Center?

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Dear editor,

As the main treatment, surgery is still the cornerstone of breast cancer management. Alterations in surgical options for breast cancer have been steadily progressive over the past 30 years, including shifts from mastectomy to breast conservation therapy (BCT) and more recently oncoplastic breast surgery (OBS). Out of mastectomy era, thanks to Veronesi and Fishers' studies, breast conserving surgery lets breast cancer patients save their breasts despite having breast cancer in many situations even in larger tumors (1-3). Thereafter, breast cancer surgery has been revolutionized by introducing OBS techniques, at least from the view point of cosmetic parameters (4). Oncoplastic breast surgery contains updated methods of breast conservation. It offers a combination of techniques used in oncologic and plastic surgeries to get better esthetic outcomes. By applying these techniques, the tumor is thoroughly excised with free margins, and local deformities are avoided by tissue displacement for small tumors and tissue replacement and breast reconstruction for larger tumors. During OBS the surgeons also pay special attention to the symmetry of the breasts and in some situations they consider a procedure on contralateral breast to achieve symmetry.

Despite considerable technical improvements in OBS, there is a lack of recommendation on the pre-requisites and major "must- know" considerations about OBS in the literature. OBS, like any other new techniques, needs its own "instructions" to be applied widespread.

In this short paper the authors have emphasized on the important points to be considered in each center where OBS is performed.

A) General Concept of OBS

The importance and the priority of oncologic aspects of the surgery should always be in mind for the surgeons. OBS cannot be categorized as a cosmetic surgery. Indeed, every surgery whose end result would be good should not be called as OBS. Oncologic considerations should never be sacrificed to get a better cosmetic result. As an extreme example, the author has visited a patient whose axillary surgery was performed through peri-areolar incision to avoid second incision in axilla. Not only the surgeon should prioritize oncologic to cosmetic aspects, but also the patients should be fully informed about the main aim of surgery. It is possible that patients with inadequate scientific knowledge consider OBS as part of a plastic surgery in which the cosmetic outcome is of greater importance. These patients urge the surgeon to put the cosmetic outcome superior. In this way the surgeon would be misled and would choose the techniques estimated to have the best cosmetic outcome and do not cover the oncologic safety.

B) Medical Center Requirements

Although in most situations no complex devices are needed to do OBS and these techniques would be simply done in every general surgery operating room, some important considerations should be taken into account. The first and the most important pre-requisite for a center in which OBS is routinely applied is multidisciplinary teamworking approach to the disease (5). It means that close collaboration among different physicians and surgeons is an essential element to apply OBS safely. The patients should be presented in a multidisciplinary meeting and all members should agree to choose these types of surgeries.

Medical oncologists should consider if BCS is suitable for the patient. They should also think about the probable risk of complications that may prolong the time between surgery and chemotherapy. Pathologists should be fully informed about the margins and re-excisions and the orientation of the surgical specimens.

Radiation oncologists should be fully familiar with the concept of different advancement and rotation flaps applied to prevent probable deformities. It is crucial to them to find the proper location of the tumor in the breast to be

able to deliver boost dose of radiation therapy in the right place. Furthermore, the availability and accessibility of radiation therapy services is another important point. Sometimes the waiting list of the patients in radiotherapy centers and long distance between living place of the patients and these centers would be a considerable problem for the patients to receive radiation therapy. It means that the surgeon who decides to perform any kind of conservative surgery, whether BCS or OBS, should be confident that the radiotherapy services are available and accessible for the patients. Besides, in well-equipped centers in which intraoperative radiation is provided to the patients, close collaboration of the surgeon and radiation oncologist should be more emphasized to get the best oncologic outcome. This would be more important using OBS. In this situation, radiation should be delivered before complex manipulations of the breast tissue needed for breast reshaping.

In the operating room the anesthesiologist and the staff should know the logic of the operation and the positions needed for re-shaping of the breast. Taking care of the neck and airway in sitting position is a critical point before performing OBS. The staff also should know how to lay the patient down on the operating table and how to fix the body and head to be ascertain for sitting position while the patients is anesthetized.

C) Expertise Qualifications and Technical Points

The surgeons who apply OBS should be aware of different techniques, how to choose the best technique, indications and contra-indications of OBS and the potential complications of each technique. As many other surgical interventions in the field of surgical oncology, most of the patients should receive different kinds of adjuvant treatments shortly after surgery; therefore, the time to recovery is of utmost importance. Choosing the best technique and being familiar with the potential complications and how to handle them can help the surgeons to play their role in the team properly (5). Even to get the best cosmetic outcome they should be fully familiar with the crucial points in choosing the best techniques according to the location of the tumor, patients' age, opinion of the patient about her future breast size (6), and patients' co-morbidities.

D) Follow Up Considerations

Before applying OBS, the surgeon should be certain that his/her colleagues in the team are reachable for the patients to be able to play their roles in follow up of the patients. OBS in all steps from the decision making to follow up is a team work. For example, expert radiologists who know the variations in breast composition made by OBS are necessary. Otherwise, the recurrence of the tumor in different imaging will be over-diagnosed. As radiologist, surgeons should keep in mind the diagnosis of fat necrosis, skin changes like dimpling especially in case of OBS and radiation therapy. So registration and documentation of the result of examination and taking photos in follow up sessions or writing the detail of the physical exams in the patient record should be done on a regular basis.

The last but not the least is the fact that all patients undergone OBS should be fully informed about its potential advantages and disadvantages. They should especially educate about the difficulties that will appeare in their follow up sessions. Finding a suspicious lesion in the operated breast may make them anxious. It means that overdiagnosis of recurrence may lead them to be assessed with more investigations in terms of both invasive and non-invasive procedures. Although in most situations the final finding will be benign post-operative conditions, it can affect the quality of life of the survivors. As a consequence, it may increase the cost of the diagnostic and therapeutic steps in follow up sessions. This would be more important in the countries with limited resources and shortness in insurance coverage. At least in this group of countries, it is recommended that the cost-effective analysis of performing OBS should be performed.

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