European Society of Surgical Oncology (ESSO) workshop

E7. Surgical principles in oncoplastic surgery

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Advances in breast health awareness, with improved screening, earlier detection of disease and more effective systemic therapy, have resulted in considerable declines in breast cancer mortality rates.

These improvements in outcomes have motivated efforts to offer comparable progress in survivorship issues such as quality of life and aesthetic improvement of breast cancer surgery.

Based upon all these principles is Oncoplastic Surgery which is a modern, accepted and comprehensive way to treat breast cancer.

The aim of this workshop is to establish which are the scientific bases, the clinical applications and the results of this new way of thinking in breast cancer treatment.

The mere terminology identify, like oncoplastic surgery, all the techniques adopted to solve a conflict between the resection of as much volume as necessary to achieve clear margins and the wish to spare as much tissue as possible to obtain a good cosmetic result. [1]

Integration of oncoplastic principles to the conservative techniques of breast resection aims to reach three goals: local control of the disease, cosmetic outcome and extension of the indications to partial breast resection. [2,3]

The oncoplastic approach allows an extensive surgical therapy, keeping safe oncologic results with excellent aesthetic outcome, reducing the indications for mastectomy without compromising either overall or relapse-free survival. [4]

Alternative indications to mastectomy appear when conservative treatment could produce poor aesthetic results and the question is if it is better to preserve a small breast, previewing a bad cosmetic outcome, or suggest to the patient a nipple-areola sparing mastectomy with immediate implant reconstruction.

Oncoplastic surgery represents a new way to program breast cancer treatment: the impact of the application of these techniques comes out from a comprehensive treatment based on a multidisciplinary approach (*W. Audretsch, Evolution and impact of oncoplastic techniques in breast cancer treatment*).

The correct timing of the procedure starts with an adequate gathering of patient information through a preoperative consultation with a breast and plastic surgeon. [5,6]

Together, they decide on indications and surgical approach and each one understands the work and needs of the other. The needs of the oncologic surgeon are mainly represented by the local therapy of the disease: in this pre-surgical setting the question to be answered by the plastic surgeon will be 'can the integration of reconstructive techniques improve the safety of resection margins'? While the plastic surgeon will be asked to predict the amount and the area of the gland resection for the correct programme of the procedure (*C. Calabrese, The oncoplastic timing in breast cancer conservative treatment*).

A strategy for establishing a new scenario of treatment is to train new surgeons with appropriate programmes in dedicated units. [7–9]

A new generation of surgeons will approach breast cancer with a specific knowledge uniting oncologic and plastic experience and be able to offer patients the best treatment available, which is not only represented by breast resection (*D. Rainsbury, A new generation of surgeons: the training in oncoplastic surgery*).

New indications and new reconstructive solutions can also be introduced in the mastectomies: in sparing mastectomies, the challenge is to have a common answer to some crucial questions. [10,11] Sparing mastectomies are oncologically safe procedures? What are the indications for skin, nipple and areola sparing mastectomies? How is the local recurrence rate? Which reconstructive solutions can be adequate to these mastectomies? Session II of the workshop will try to answer all of these questions (*K. Clough, P. Veronesi, M. Nava The skin sparing mastectomies: Questions and Answers*).

It is already generally accepted that radiotherapy negatively affects the outcome of implant breast reconstruction. However, this issue is moving from a dogma to a question. Only the patients follow up will show the real impact of radiotherapy on a double stage reconstructed breast but, predicting radiotherapy, when are we able to change the indications to reconstruction? The timing of surgical treatment, chemotherapy and radiotherapy is crucial: following the principle of multidisciplinarity, a close cooperation between the reconstructive surgeon, the oncologic surgeon, the oncologist and the radiotherapist is necessary (*Y. Kirova, Reconstruction and radiotherapy*). [12,13]

Principles of oncoplastic surgery can also be extended to autologous tissue transfer where the quality of the procedure depends upon the combination of microsur-

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gical skills and reshaping techniques.[14,15]. A free flap which is not tailored, considering the aesthetic result, has partially failed its goal (*P. Blondeel, Is microsurgery an oncoplastic tool?).*

The role of autologous fat in breast reconstruction has witnessed tremendous advances in the last few years. This science is only just beginning and right now there are more questions than answers but the conviction that the future will hold a very large role for stem cells in reconstructive breast surgery is spreading. The first clinical applications started from the evidence that stem cells contribute to the restoration of tissue vascolarisation and organ function and were dedicated to solve the side effects of radiotherapy.[16] Today, fat grafting should be considered a safe procedure in correction of unfavourable results from conservative treatment and a useful tool associated with implants in mastectomy reconstruction (*G. Rigotti, Lipofilling in breast reconstruction*).

Conflict of interest statement

None declared.

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