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Post-Mastectomy Breast Reconstruction

Silicone versus autologous tissue

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Post-Mastectomy Breast Reconstruction

Silicone versus autologous tissue

by Dr Klaus Brunnert, MD

The decision in favor of or against a certain method of breast reconstruction is very individual and has to be considered according to the particular wishes of the individual patient. The most important question that arises after the patient's general consent is whether a certain method can be performed taking into consideration the patient's local tissue situation. The answer to this question has to be provided by an experienced surgeon. This requires an in-depth and comprehensive consultation with the patient targeting at her informed consent.

Generally, implant reconstruction and autologous reconstruction are on a par. It is up to the surgeon and patient to interact and to determine the method which is adequate under the given conditions. My own experience and the analysis of comparative study results¹ indicate a superior aesthetical outcome for autologous reconstructions, especially considering the long-term results. However, the surgical complexity of autologous reconstructions is considerably higher, especially, since additional scars are created at the donor site. For many patients this effect is a reason to decide against autologous reconstruction, even if they have the choice.

A skin-sparing mastectomy preserves the skin envelope of the breast and under favorable conditions also the nipple-areola complex. This method clears the way for very aesthetic long-term results with the help of silicone implants particularly if bilateral surgery is performed and no post-operative radiotherapy is indicated (e.g., in case of a prophylactic mastectomy or precancerous lesions such as DCIS). If a post-operative radiotherapy is necessary, it is preferable to opt for the delayed reconstruction with autologous tissue. The use of silicone implants is an exception under the latter circumstances.

Breast reconstruction with silicone implants – when is the right time?

Should a mastectomy become inevitable, breast reconstruction can be immediate or delayed. Studies² have proven repeatedly that women who decided in favor of an immediate reconstruction suffered less from depression or fear. Also they would decide in favor of the same procedure again. Moreover many patients who initially decided against a reconstruction would retrospectively decide in favor of an immediate reconstruction.

The conditions for an immediate reconstruction with implants are especially favorable if a skin-sparing mastectomy can be performed that preserves the skin envelope of the breast, the nipple-areola complex and the infra-mammary fold. In comparison to the modified radical mastectomy this procedure has no higher risk of local recurrence.

On the other hand, a post-operative radiotherapy of the thoracic wall increases the risk of a capsular fibrosis of the implant pocket by 50 percent. The capsular fibrosis leads to shrinkage and hardening of the scar tissue that surrounds the implant. In most cases, however, at least an aesthetically satisfying result can be achieved by exchanging the implant and removing the capsule.

After a mastectomy followed by radiotherapy of the thoracic wall a delayed reconstruction with silicone implants is not recommended because of the loss of the skin's elasticity and its ability for regeneration. The procedure would only be effective if combined with autologous flap surgery. Of course, there are exceptions where skin expansion with the help of tissue expanders may lead to a satisfactory result.



Positioning of silicone implants: below or above the pectoralis muscle

As a rule, the positioning above the muscle results in a superior, more direct molding of the breast shape – or rather the covering tissue – and it creates less discomfort. However, if the soft-tissue coverage above the implant is less than two centimeters thick, there is risk that the implant folds are visible on the breast surface and will cause implant wrinkling or rippling. This is intolerable for the patient and aesthetically less satisfactory.

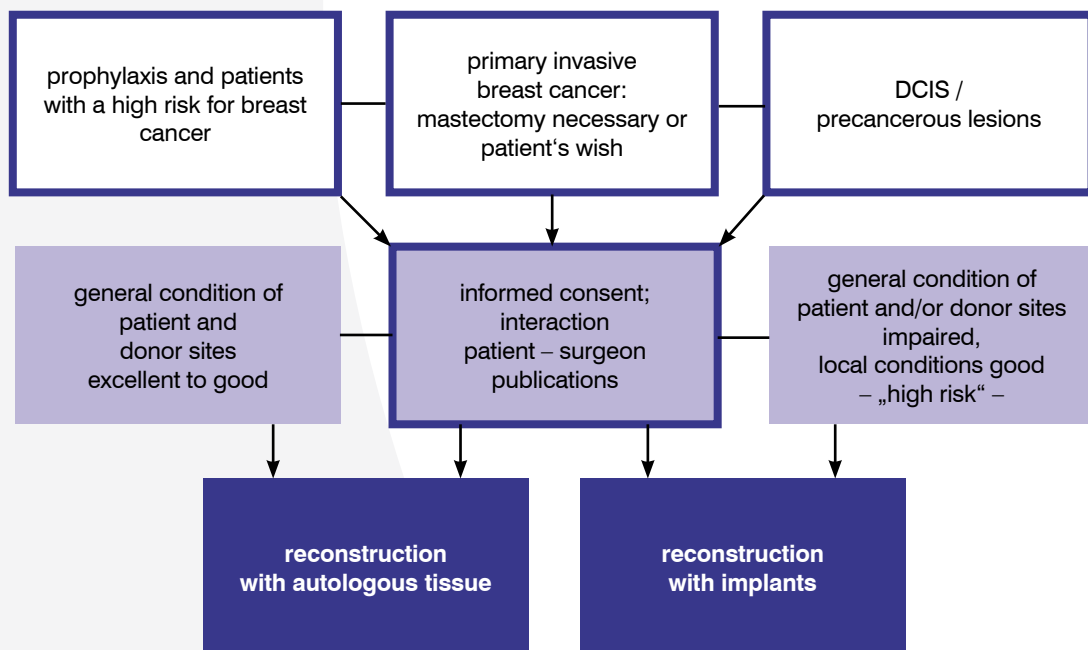
For this reason I have positioned the implants below the Musculus pectoralis major with two thirds of my patients (66.7 percent). In this case I do not cover the implant completely with the muscle: due to the extent of the pectoralis muscle the lower third of the implant remains uncovered. In case of a skin-sparing mastectomy, this muscle-free region is covered with a titanized ultralight polypropylene mesh or acellular dermis of the size necessary. Thus the implant coverage and the fixation of the muscle are improved.

Differences of silicone implants

The fourth generation of silicone breast implants is now in use. The implants differ from their predecessors with regard to filler material, shell and shape. Today's implants have an anatomical shape and are filled with a cohesive (non-fluid) gel that is protected by a leakproof, so-called low-bleed shell consisting of several layers. The implants are available with different surfaces, i.e. smooth, textured or coated with micropolyurethane foam. Studies show³ that in the long run the best results with regard to the prevention of capsular fibrosis are attained with micropolyurethane-foam-coated implants. This is due to their tissue adherence and the active ingrowth into the foam coating of the implant surface. Thus these implants avert a capsular contracture of the implant-surrounding scar tissue as well as implant rotation and distortion.

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p28–29; www.mammamia-online.de



Literature: 1 Wilkins, E. G. et al. (2000): Prospective Analysis of Psychosocial Outcomes in Breast Reconstruction: One-Year Postoperative Results from the Michigan Breast Reconstruction Outcome Study; 2 Fernandez Delgado, M. J. et. al. (2008): Satisfaction with and Psychological Impact of Immediate and Deferred Breast Reconstruction; 3 Handel, N. et al. (2006): Long-Term Study of Outcomes, Complications and Patient Satisfaction with Breast Implants



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