Standards in Oncoplastic Breast Reconstruction

Christine Radtke

Department of Surgery, Division of Plastic and Reconstructive Surgery, Medical University of Vienna, Vienna, Austria

Breast cancer treatment is a multidisciplinary approach including interdisciplinary collaboration between oncologists, surgeons, and psychologists. Overall, the American Cancer Society estimates that over 250,000 new cases of invasive breast cancer were diagnosed in the United States in 2017. With focus on breast reconstruction, methods are developing toward more specialized and less invasive mastectomy procedures with aesthetic refinements. Estimates from 2016 indicate that breast reconstruction accounted for nearly 2.0% of all reconstructive procedures. There has been annual growth in breast reconstruction with a 40% increase since 2000 and about 3% increase since 2015. Moreover, there has been a rise in patient requests for bilateral mastectomy.

In the focus of the current issue of *Breast Care*, the aim is to give insights into the current standards in oncoplastic breast reconstruction. Therefore, a collection of new scientific results, clinical studies, and psychological aspects of reconstructive surgery was carefully arranged to give the readers an overview of newest standards of care.

The first article in this selection by Paprottka et al. [1] is entitled “Risk factors for complications after skin-sparing and nipple-sparing mastectomy.” The diagnosis of breast cancer brings about many challenges for the patient and the treating surgeon. To reduce complication rate in breast reconstruction preoperatively, certain risk factors should be recognized.

A retrospective statistical analysis was performed of breast cancer patients who underwent skin-sparing or nipple-sparing mastectomies for breast reconstructive surgery. Mean follow-up time was over 2 years. The study

could identify that age and cardiovascular disease are significant risk factors for increased complication rates and should be considered into the surgical consideration for reconstructive procedures.

The second paper is focusing on achieving symmetry after unilateral free flap breast reconstruction, which often requires a contralateral procedure for aesthetic refinements [2]. Current literature does not provide sufficient information about the advantages or disadvantages of immediate contralateral breast symmetrisation combined at the time of autologous breast reconstruction. This comparative study by Giordano et al. [2] gives important clinical insight in immediate versus delayed contralateral breast symmetrisation in breast reconstruction. Breast reconstruction was performed with latissimus dorsi flap demonstrating that immediate symmetrisation at the time of breast reconstruction is safe and that the vast majority did not require consecutive surgeries for symmetry.

The third article presents newest scientific research with regard to adipose derived stem cells (ASC) [3]. Especially, the field of breast reconstruction with lipofilling after cancer treatment is fractured by opposing scientific studies, clinical evidence, and the personal experience of the surgeon. The application of lipoaspirate for breast reconstruction containing ASCs and their role is not clear yet. Specifically, there is a major concern of cancer recurrence after fat grafting. Clinical evidence to demonstrate clearly that fat grafting causes cancer recurrence is fragmentary and the subject is controversially discussed. Sauter et al. [3] are demonstrating here, after establishment

of a unique in vitro model of ASC migration, that ASCs preferably migrate towards breast cancer cells, a subject many in vivo studies refer to.

Last, psychological aspects of breast reconstruction after breast cancer are presented by Pittermann et al. [4]. The diagnosis of breast cancer is a significant threat for the affected woman and her family. The treatment may include reconstructive surgery, which can help restoring a satisfactory body image. Here, the authors describe in detail that for many patients, in the hierarchy of needs, health is superior to cosmetic considerations and patients wish a “normal” looking breast rather than a breast that is “good” looking. The female breast has significant im-

portance for self-identity and body image; it is fundamental to keep the psychological impact of reconstructive breast surgery in mind.

The presented articles of this focus can only highlight certain aspects of oncoplastic reconstructive surgery and it is important to strengthen interdisciplinary collaboration, to continue clinical outcome studies with high evidence and basic scientific research to achieve optimal and best results for our patients.

Disclosure Statement

The author has no conflicts of interest to declare.

References

- 1 Paprottka FJ, Schlett C, Luketina R, Paprottka K, Klimas D, Radtke C, et al. Risk Factors for Complications after Skin-Sparing and Nipple-Sparing Mastectomy. *Beast Care*. 2019 Oct; 14(5): <https://doi.org/10.1159/000503218>.
- 2 Giordano S, Harkkila S, Oranges CM, di Summa PG, Koskivuo I. Immediate versus Delayed Contralateral Breast Symmetrisation in Breast Reconstruction with Latissimus dorsi Flap: A Comparative Study. *Beast Care*. 2019 Oct; 14(5):1–5.
- 3 Sauter MA, Brett E, Müller CM, Machens HG, Duscher D. Immediate versus Delayed Contralateral Breast Symmetrisation in Breast Reconstruction with Latissimus dorsi Flap: A Comparative Study. *Beast Care*. 2019 Oct; 14(5): <https://doi.org/10.1159/000503411>.
- 4 Pittermann A, Radtke C. Psychological Aspects of Breast Reconstruction after Breast Cancer. *Beast Care*. 2019 Oct; 14(5): <https://doi.org/10.1159/000503024>.