

The Impact of Post-Mastectomy Radiotherapy on Delayed Alloplastic Breast Reconstruction – Experience of One Center

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Abstract

Background and objectives: Nowadays, breast cancer treatment spans from simple lesion excision to complex management including surgery (mastectomy with or without axillary lymphadenectomy) and adjuvant treatment (chemotherapy, radiotherapy, hormonal therapy and immunotherapy). Lately, breast reconstruction has become part of the breast cancer approach, but, while its physical and emotional benefits are undisputed, it comes with its own set of risks and complications, especially when delayed breast reconstruction after radiotherapy is performed. This paper aims to present our experience on the effects of radiotherapy in conjunction with delayed alloplastic breast reconstruction.

Materials and Methods: We conducted a retrospective study on 16 patients with mastectomy for breast cancer, for whom delayed breast reconstruction was chosen. Depending on the existence of postmastectomy radiotherapy, patients were assigned to one of two groups: group 1 consisted of eight patients that received adjuvant radiotherapy and group 2 of eight patients that did not. We collected a series of data (sociodemographic, type of reconstructive intervention, adjuvant therapies, etc.) and afterwards we analyzed the cases in which complications occurred.

Results: The number and severity of complications after breast reconstruction was higher in the adjuvant radiotherapy patient group. Seven patients had complications, three of those were major: one TRAM flap partial necrosis, one expander extrusion and one chest wall cellulitis. The therapeutic approach was surgical debridement and secondary reconstruction with latissimus dorsi flap. We noted only one major complication (expander extrusion) in the no-radiotherapy group.

Conclusions: Despite the vast array of reconstructive surgical techniques at our disposal, there is still no clear protocol regarding breast reconstruction in patients receiving radiation therapy. The majority of patients tend to opt for the simplest intervention, i.e. expander-implant reconstruction, which is usually accompanied by complications when combined with radiotherapy. Comprehensive and open communication between oncologist, radiotherapist, plastic surgeon and patient ensures optimal results.

Key words: breast, reconstruction, autologous, alloplastic, radiotherapy, delayed