

Outcomes of Autologous Fat Grafting Following Breast Reconstruction in Post-Mastectomy Patients

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Abstract

Background:Autologous fat grafting has become a widely used adjunct for refinement of both implant-based and autologous tissue breast reconstruction. However, there are only a few studies evaluating the results of autologous fat grafting in this patient population. The purpose of this study was to assess the outcomes of autologous fat grafting following post-mastectomy breast reconstruction.

Methods:We retrospectively reviewed the medical records of consecutive post-mastectomy patients who underwent autologous fat grafting after breast reconstruction at a university center over a five-year period with at least six months of follow-up. We reviewed patient demographics; mastectomy and reconstructive operative details; autologous fat grafting outcomes including local and distant/systemic complications; suspicious clinical and imaging findings requiring biopsy; and locoregional cancer recurrence rates. Descriptive statistics were generated for these outcomes.

Results:Between January 2008 and July 2013, 108 women underwent autologous fat grafting for contouring following breast reconstruction. Their ages ranged from 22 to 71 years (mean 48). Forty-eight (44.4%) patients underwent unilateral mastectomy, whereas 60 (55.6%) had bilateral mastectomies. For unilateral mastectomy patients, 24 (50%) underwent implant-based reconstruction and 24 (50%) received autologous tissue reconstruction. Among patients with bilateral mastectomies, 15 (25%) underwent implant-based reconstruction, 32 (53.3%) received autologous tissue reconstruction, and 13 (21.7%) underwent combinations of these approaches. Fat grafts were harvested, processed, and injected using the Coleman technique¹. The median volume of fat injected was 95 cc (range 20–320). Follow-up ranged from 6.3 to 57.4 months (mean 15.5). Thirty-nine (36.1%) women underwent imaging following autologous fat grafting. Imaging was unremarkable in 21 (19.4%) patients, and non-suspicious imaging lesions were identified in 14 (13.0%) patients. Suspicious imaging lesions were discovered in four (3.7%) patients, and clinically palpable lesions were detected in another four (3.7%) patients. All eight patients underwent biopsies (four core and four excisional), all showing only fat necrosis. One (0.9%) local complication, a wound infection requiring oral antibiotics, was reported. There were no systemic complications. During this limited follow-up period, no study patients had locoregional cancer recurrence.

Conclusions:Autologous fat grafting in conjunction with breast reconstruction resulted in a biopsy rate of 7.4%, and no cases of locoregional cancer recurrence were observed. Based on these preliminary findings, autologous fat grafting appears to be a relatively safe procedure for refinement of the reconstructed breast in post-mastectomy patients.

References

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