patients intuitive advantages of a shortened operative process and quality of life benefits compared with traditional tissue expanders and implants (TE/I); however, the literature suggests that DTI is fraught with complications and revision rates as high as 85% in some reports. We sought to better understand our breast patients by comparing DTI and TE/I, focusing on these two potential downsides: complications and revision rates.

METHODS: A retrospective review was conducted on a prospectively maintained database of post-mastectomy reconstructions from September 2014 to February 2017. Complications assessed included infection, hematoma, seroma, poor wound healing, device exposure and capsular contracture, re-operation, as well as revisional procedures. Analysis was performed using chi-square test (Stata®, College Station, Texas). Length of stay (LOS) and pain scores were also reviewed.

RESULTS: 209 breast reconstructions were completed in 122 women, 113 (54.1%) TE/I and 96 (45.9%) DTI. Mean follow-up was 18.7 months for TE/I and 12.5 months for DTI. Prior breast radiation was 15.9% in TE/I and 3.1% in DTI. Incidence of post-operative complications was not significantly different including infection (1.7% TE/I, 0% DTI), hematoma(0% TE/I, 1.0% DTI), seroma(0% TE/I, 0% DTI), poor wound healing(1.8% TE/I, 2.1% DTI), device exposure(0.9% TE/I, 3.1% DTI), and capsular contracture(0% TE/I, 1.0% DTI). Device loss/change, specifically removal of implant and placement of TE in DTI patients and removal of TE in TE/I patients, was similar (1.8% TE/I, 3.1% DTI p=0.52). Interestingly, there was a significant difference of re-operation for correction of aesthetic or function concerns in the TE/I cohort with higher rates of lipofilling, implant exchange, mastopexy, and/or inframammary fold revision (37.2% TE/I, 9.3% DTI p<0.01). LOS and pain scores were slightly lower in the DTI cohort compared with TE/I (LOS: 1.81 vs 2.01; Pain scores 3.5 vs 3.7).

CONCLUSION: Though previous studies have demonstrated otherwise, our analysis found that DTI and TE/I reconstructions were not significantly different in regards to postoperative complications or device loss. Further, DTI reconstructions had significantly lower rates of operative revisions for aesthetic concerns. These results demonstrate an important finding that DTI reconstruction not only confers the advantages of a shorter overall reconstructive course, but may result in favorable aesthetic outcomes without need for revisional procedures in properly selected patients.

Complications Following Two-Stage Expander Implant Breast Reconstruction: A Critical Analysis of Outcomes

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INTRODUCTION: Two-stage expander implant breast reconstruction is commonly performed following mastectomy. Salvage and long-term outcomes following development of complications have not been well described. We examined a single surgeon’s experience to study the rate of re-operation secondary to complications after first-stage expander placement, and to evaluate their final outcomes. Better understanding of salvage techniques may help guide future management.

METHODS: We performed a retrospective analysis of consecutive patients who underwent placement of a tissue expander (TE) for breast reconstruction between December 2006 and August 2015 with the senior author. Patient demographics including age, race, body mass index (BMI), history of radiation to the breast were collected. Surgical factors including type of mastectomy, immediate versus delayed reconstruction, and location of tissue expander (total submuscular versus with acellular dermal matrix) were recorded. Complications resulting in re-operation included infection (60%),...
mastectomy skin necrosis (27%), and TE extrusion through thin mastectomy skin (11%). The affected TE was removed and exchanged in 17 patients (38%), autologous flap reconstruction occurred in 16 patients (36%), and TE was explanted without replacement in 12 patients (27%).

CONCLUSION: Infectious complications including cellulitis and abscess formation accounted for the majority of cases requiring re-operation following TE placement for breast reconstruction. Over a quarter of patients who underwent a re-operation ultimately lost their implants. Patients undergoing two-stage expander implant breast reconstruction should be appropriately counseled regarding the possibility of requiring a re-operation in the setting of developing a complication.

Evaluating Reconstructive Outcomes with Immediate, Permanent Implant Reconstruction after Unilateral Nipple-Sparing Mastectomy

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INTRODUCTION: Nipple-sparing mastectomy (NSM) with immediate, permanent implant reconstruction can achieve excellent results in a single-stage. Outcomes, including ability to achieve symmetry with the contralateral breast, have not yet been established and compared in unilateral reconstructions.

METHODS: Patients undergoing NSM with unilateral immediate, permanent implant reconstruction were reviewed and compared to bilateral reconstruction.

RESULTS: Of 1037 NSMs, 234 (22.6%) underwent immediate, permanent implant reconstruction. Thirty-two patients (13.7%) underwent immediate, permanent implant reconstruction after unilateral NSM. Average age and BMI were 51.47 years and 22.47 kg/m². Approximately 84% of patients underwent NSM for a therapeutic indication; 8 (25%) patients had a contralateral cancer reconstructed. Of these, 7 patients (21.9%) had a prior contralateral cancer reconstructed and one patient (3.1%) underwent a simultaneous, contralateral tissue expander-based breast reconstruction. The majority (75.0%) of reconstructions utilized smooth, round implants; 15.6% utilized textured, anatomic implants. Acellular dermal matrices were utilized in 78.1% of patients. Average implant size was 351.07 mL. Average follow-up time was 27.39 months.

The most common reconstructive complications were partial nipple necrosis (15.6%) and minor mastectomy flap necrosis (9.4%) followed by major mastectomy flap necrosis and hematoma (3.1%, each). There were no instances of complete nipple necrosis, explantation, or reconstructive failure.

Nine patients (28.1%) underwent subsequent operative breast revisional procedures. Contralateral symmetrizing procedures were undertaken in 21.9%; 6.3% underwent ipsilateral symmetrizing procedures. Revisional procedures included ipsilateral or contralateral mastopexy (12.5%), excision of excess lateral skin (6.3%), augmentation/mastopexy, implant exchange, and tissue expander for implant exchange (3.1%, each). Contralateral symmetrizing procedures were performed in 40% (2/5) of patients who underwent contralateral breast reconstruction. The average number of reconstructive procedures per breast and per patient were 1.34 and 1.25, respectively.

Compared to bilateral NSM with immediate, permanent implant reconstruction, there was no significant difference in terms of implant size (p=0.3959) or implant profile (p=0.9067). When revisional procedures were compared on a per breast basis, there was no significant difference between unilateral and bilateral reconstructions (p=0.2305). When compared on a per patient basis, patients with unilateral single-stage implant NSM reconstruction were found to undergo significantly less revisional procedures compared to bilateral reconstructions (p=0.0445).

CONCLUSION: Immediate, permanent implant reconstruction after unilateral NSM achieves excellent results in a single-stage without needing additional reconstructive procedures in the majority of cases.