

One-Stage Immediate Breast Reconstruction With Implants: A New Option for Immediate Reconstruction

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Abstract

Background: The current standard of care for breast implant reconstruction after mastectomy is 2-stage reconstruction with placement of tissue expanders followed by implants. The immediate use of implants at the time of mastectomy, which eliminates the need for a second operative procedure, has been sparsely reported and is not yet accepted as the standard of care. This study describes a 1-stage immediate implant reconstruction technique and evaluates its risks.

Methods: Between 2005 and 2010, immediate implant reconstruction was performed in 43 sequential patients on a total of 78 breasts. Permanent silicone implants were placed at the time of mastectomy with the assistance of acellular dermal matrix (ADM). Follow-up was for an average of 575 days. Implant sizes varied widely from 175 to 800 mL. In order to create the correct breast shape and implant placement, specific techniques of acellular dermal matrix placement in the reconstruction were critically important. Aesthetic evaluation of the patients was performed, evaluating pre- and postoperative photos by 20 evaluators. Pictures were rated according to a 4-point Harris breast scale. A 2-sided paired t test was then used to compare the rating scores.

Results: Complication rates were as follows: seroma occurred in 6.4% of breasts; infection resolving with antibiotics occurred in 2.6%; infection requiring implant removal occurred in 3.8%; and hematoma occurred in 1.3%. Neither preoperative breast size nor implant size correlated to an increased risk of complications ($P > 0.05$). Complication rate increased with age ($P = 0.02$). The average score for the preoperative images was 2.1, whereas the postoperative average was 2.4. This represented a statistically significant improvement above the baseline (preoperative) breasts with a $P < 0.001$, according to a 2-sided paired t test.

Conclusions: With complication rates similar to previously reported tissue expander reconstructions, immediate implant reconstruction is a viable alternative to 2-stage expander reconstruction, presenting many advantages over expander reconstruction while offering the same risk profile and eliminating the additional risks, costs, and discomfort of a second procedure. Additionally, aesthetic results were highly satisfactory according to patients themselves and based on evaluation by independent observers.

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