Direct-to-Implant Breast Reconstruction With Absorbable Mesh: An Analysis of Cost and Complications

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Abstract

Background: Immediate direct-to-implant breast reconstruction (DTI) has gained popularity in recent years with improvement in skin/nipple-sparing mastectomy and the availability of acellular dermal matrix (ADM). Success in immediate DTI reconstruction using an ADM sling has been demonstrated in multiple studies, including a large published series from our own institution. We hypothesize that DTI reconstruction is possible with absorbable mesh (Vicryl™) in place of ADM, providing for a reliable and cost-effective reconstruction.

Methods: A retrospective review was performed of 40 consecutive direct-to-implant breast reconstructions performed by the senior author (WGA). All patients were followed for a minimum of one year and known demographic risk factors and complications were recorded.

Results: Sixty-one breasts in 40 consecutive patients were reconstructed using an immediate direct-to-implant approach with absorbable mesh Vicryl™. Nineteen (47%) cases were unilateral and 21 (53%) cases were bilateral. Mean implant size was 471cc (range 150 – 800cc) with an implant volume to specimen weight ratio of 0.91. Mean follow up is 21.2 months (range 17.6-25.4 months). Two patients experienced complications requiring re-admission (5%) leading to one implant loss (1.6%). There was no incidence of skin necrosis, seroma, or hematoma in this series. Implant position and aesthetic results were acceptable in all patients. Cost analysis of replacing Vicryl™ mesh for ADM in direct-to-implant reconstruction in our institution (MGH) demonstrated a 33% and 41% cost reduction in unilateral and bilateral cases, respectively.

Discussion: Direct-to-implant breast reconstruction using absorbable mesh resulted in satisfactory aesthetic outcomes, a low complication rate, and lower cost. We believe this series demonstrates a novel cost-effective approach for direct-to-implant breast reconstruction.

Reference Citations: