

# Acellular dermis for repair of inferior fold malposition with impending implant exposure and rippling following 13 previous failed revisions

Kaveh Alizadeh, MD, MS, FACS  
Garden City, New York

## Patient history

Patient is a 42 year-old female, 5-foot 2-inch, 110-pound G2P0 who had undergone 13 previous breast surgeries. Her initial surgery was for primary bilateral augmentation mammoplasty. This was followed by seven subsequent surgeries by her primary surgeon to correct implant malposition. She was then referred to multiple other surgeons who attempted to correct the implant malposition. Various approaches were undertaken with saline or silicone implants by attempting to place the implants in submuscular or subglandular planes. None of these approaches were satisfactory as the patient reported noting increased loss of lower pole shape as well as projection. Her most recent surgery was performed over a year ago via a second 7cm inferior pole incision, halfway between the areola and the inframammary fold (IMF), with resultant thinning and stretching of the scar and impending implant exposure.

## Presentation

Patient presented at author's practice seeking "better [breast] shape with more projection and less scars" and hoping to attain her original goal of size 34C breasts. She denied any medication use or allergies and reported a 20 pack per year tobacco use history. Breast examination revealed bilateral inferior fold malposition, visible rippling at the medial and superior poles, loss of medial pocket domains, and impending implant exposure. In addition, she had Baker's grade III capsular contracture on the right breast and grade II contracture on the left breast (Figure 1).

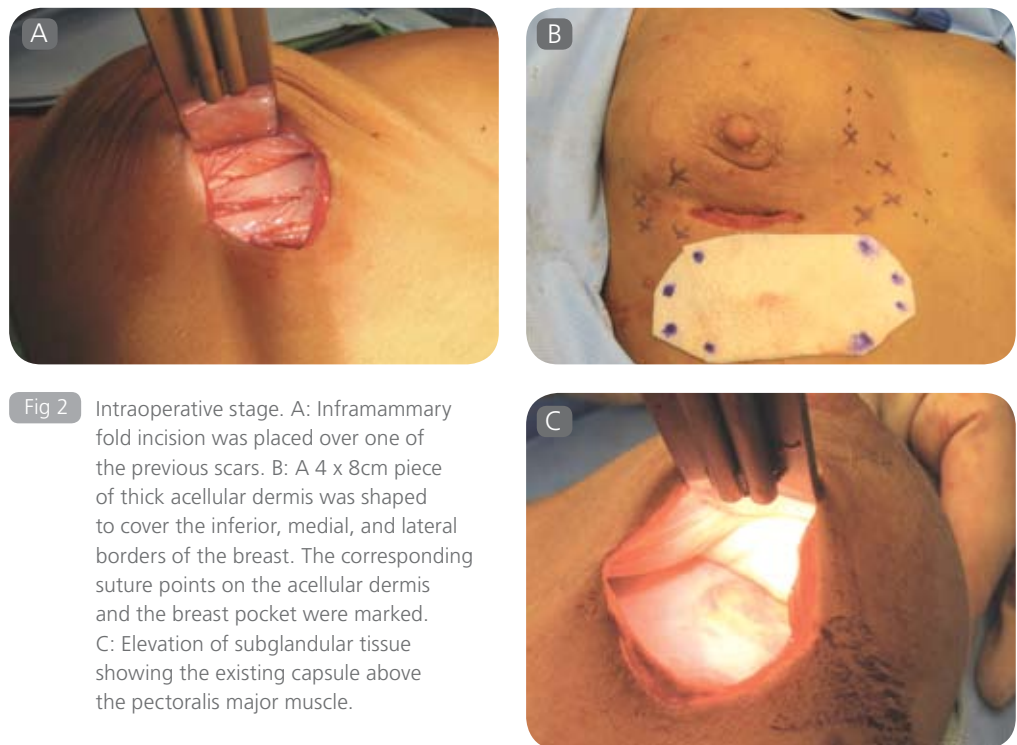


**Fig 1** Preoperative stage. Note: Bilateral implant malposition with impending implant exposure due to thinning of skin at the lower poles, nipple areolar dystopia and visible scarring and rippling at the medial, superior and inferior poles.

# Acellular dermis for repair of inferior fold malposition with impending implant exposure and rippling following 13 previous failed revisions

**Management plan** Capsulectomy of the right breast and capsulotomy of the left breast followed by conversion to a submuscular plane, implant exchange, and the use of acellular dermis for inferior pole support and medial border reinforcement to camouflage rippling were planned for this patient. Inamed style 20, 375cc, silicone implants were selected for this patient.

**Repair** Preoperatively, bidimensional planning incorporated measurement of the lower arc of the breasts, nipple to IMF distance, sternal notch to nipple distance, nipple to midline distance, and areolar diameter. The desired IMF position and the desired nipple to fold distance were also measured and marked.



Intraoperatively, in both breasts, a 5cm incision was made at the IMF while excising the old scar (Figure 2A). A 4 x 8cm piece of thick acellular dermis (AlloDerm® Regenerative Tissue Matrix) was prepared according to the manufacturer's instructions and trimmed appropriately to cover the inferior, medial, and lateral border of each breast. The acellular dermis was then placed below the IMF, and the corresponding points of fixation on the acellular dermis and the pocket were marked (Figure 2B). This helps to position the acellular dermis during the repair. In each breast, to reinforce the medial border of the breast and to camouflage rippling, a second 4 x 8cm piece of thick acellular dermis was also prepared.

### Right breast

The subglandular capsule (Figure 2C) was dissected and removed from the pocket. The pectoralis major muscle (PMM) was released inferomedially and elevated off the chest wall. A new implant pocket was dissected under the PMM and was irrigated with a triple antibiotic solution consisting of Bacitracin 100,000U; Gentamycin 80g; and Cefazolin 1g in 1L normal saline. The prepared acellular dermis was positioned, with its dermal surface facing upwards, at the lower pole. The acellular dermis was anchored inferiorly at the desired IMF and medially and laterally to the chest wall using 2-0 running PDS sutures. The new implant was then introduced into the pocket under the elevated PMM. The inferior border of the PMM was brought over the implant and sutured to the superior border of the acellular dermis. The second piece of acellular dermis was placed over the PMM at the medial border of the breast and sutured to the medial edge of the sternal fascia. The incision was then closed in anatomical layers.

### Left breast

The capsule was cut open and the implant was removed. The PMM was released inferomedially and a new pocket was dissected under the elevated PMM. The pocket was rinsed with the triple antibiotic solution prior to new implant introduction. The prepared acellular dermis was placed anterior to the capsule at the desired IMF and was anchored to the existing capsule inferiorly, medially and laterally, and to the PMM superiorly allowing the implant to be positioned in a dual plane pocket. The second piece of acellular dermis was placed interpositionally between the dermis and the PMM and anchored to the medial edge of the sternal fascia. Repair was completed by closure of the incision in anatomical layers.

The patient was discharged on the same day. DURICEF® (Warner Chilcott) 500mg po bid for 5 days, CELEBREX® (Pfizer) 200mg po qd for one month, and PERCOCET® (Endo Pharmaceuticals) as needed were prescribed for pain management.

## Outcome

There were no complications during the immediate postoperative period. After a follow-up period of 24 months, the patient continues to remain complication free (Figure 3).

## Conclusion

In the author's opinion, the use of acellular dermis at the inferomedial border helped to recreate the IMF, prevent implant exposure and camouflage rippling, while reducing the size of the implant by controlled reduction of the breast pocket. Improved results were obtained in this patient, given that she had 13 previous breast surgeries. Differential expansion of the left lower pole was not attempted at the time of repair as the skin of the lower pole was extremely fragile. Differential expansion could have improved the overall symmetry of the breasts further. A planned scar revision of the mid left breast incision will improve the aesthetic appearance.



**Fig 3** Postoperative stage: At 24 months of follow-up. Note: Crisp definition of inframammary fold and medial pole domain and re-establishment of lower and superior pole projection.



The surgical techniques described herein are suggested techniques for using LifeCell™ Tissue Matrices. Proper surgical procedures and techniques are necessarily the responsibility of the medical professional. Each surgeon must evaluate the appropriateness of the techniques based on his or her own medical training and expertise. Many variables including patient pathology, anatomy and surgical techniques may influence procedural outcomes. Before use, surgeons should review all risk information, which can be found in the *Instructions for use* attached to the packaging of each LifeCell™ Tissue Matrix.

### LifeCell Corporation

One Millennium Way  
Branchburg, NJ 08876  
Tel: 908.947.1100  
Fax: 908.947.1200

LifeCell Customer Support  
800.288.9247

[www.lifecell.com](http://www.lifecell.com)

