

Hybrid Breast Augmentation Using Subglandular Implants and Intraoperative Contour-Guided Fat Grafting in a Slender Patient: A Case Report

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Case Report

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Additional Declarations: The authors declare no competing interests.

Abstract

Background

Hybrid breast augmentation combines breast implants with autologous fat grafting, allowing the implant to provide predictable central volume and projection while fat grafting can improve soft-tissue coverage and refine breast contour. This approach may be particularly useful in slender patients, in whom implant edges and transitions may be more visible because of limited soft-tissue thickness.

Case Presentation

A 21-year-old woman (150 cm, 37 kg; body mass index, 16.4 kg/m²) presented for primary breast augmentation. She desired increased breast volume while maintaining a natural contour. Because she frequently wore dresses exposing the axillary region, she preferred to avoid an axillary scar, and an inframammary approach was selected. Bilateral 280-cc PERLE Moderate-profile implants were placed in the subglandular plane. Autologous fat was harvested from the medial thighs and processed using a condensed rich fat technique. The amount and distribution of fat grafting were not predetermined. After implant placement, breast contour, symmetry, upper-pole fullness, and implant-edge transitions were reassessed intraoperatively. Fat grafting was then tailored to the residual contour deficiencies. A total of 130 cc was injected into the right breast and 100 cc into the left breast, primarily targeting the décolletage and implant-edge transition zones. At 3 months postoperatively, breast contour and symmetry were satisfactory. No infection, clinically apparent capsular contracture, palpable fat necrosis, or clinically significant asymmetry was observed.

Conclusion

In a slender patient undergoing subglandular breast augmentation, intraoperative contour-guided fat grafting allowed the implant to provide the principal breast volume while autologous fat was selectively used to improve upper-pole contour and soften implant-edge transitions. Determining the fat-grafting volume after implant placement may provide a simple method for individualizing hybrid breast augmentation according to the actual intraoperative breast contour.

Introduction

Breast augmentation with silicone implants provides a predictable increase in breast volume and projection. However, implant-based augmentation alone may not fully address localized soft-tissue deficiencies, pre-existing asymmetry, or visible transitions between the implant and the surrounding chest-wall soft tissue. These limitations may be particularly relevant in slender patients with a thin soft-tissue envelope.

Autologous fat grafting has increasingly been used as an adjunct to implant-based breast augmentation. The combination of an implant and autologous fat, commonly referred to as hybrid or composite breast augmentation, allows the implant to provide the central structural volume while fat grafting can be used to refine contour, improve soft-tissue coverage, and camouflage implant margins. Previous reports have described fat grafting as a useful adjunct for reducing implant visibility or palpability and smoothing contour transitions, particularly in patients with limited soft-tissue coverage [1–3].

The optimal quantity and distribution of fat required for contour refinement may vary considerably among patients and between the two breasts of the same patient. We describe a case of primary hybrid breast augmentation in a markedly slender young woman in whom the volume and distribution of fat grafting were determined after implant placement according to direct intraoperative assessment of the resulting breast contour.

Case Presentation

A 21-year-old woman presented to our clinic seeking primary breast augmentation. She was 150 cm tall and weighed 37 kg, corresponding to a body mass index of 16.4 kg/m².

The patient desired an increase in breast volume while maintaining a natural transition between the breast and chest wall. Because she frequently wore dresses and clothing that exposed the axillary region, she specifically preferred to avoid an axillary scar. Following discussion of the available surgical approaches, an inframammary incision was selected.

Given her slender habitus and limited soft-tissue volume, a hybrid approach combining implant augmentation with autologous fat grafting was planned. The implant was intended to establish the principal breast volume and projection, whereas fat grafting was intended to provide targeted contour refinement and additional soft-tissue coverage where required.

Surgical Technique

Bilateral inframammary incisions were used for implant placement. Subglandular pockets were created, and a 280-cc PERLE Moderate-profile implant was placed in each breast.

Autologous fat was harvested from the medial thighs and processed using a condensed rich fat technique.

The amount of fat to be injected into each breast was intentionally not fixed before implant placement. After both implants had been inserted, the breasts were reassessed intraoperatively. Particular attention was paid to overall symmetry, décolletage and upper-pole fullness, and the transition between the margins of the implant and the surrounding soft tissue.

Areas in which additional soft-tissue coverage or contour refinement was considered desirable were then treated with autologous fat grafting. Fat was preferentially distributed to the décolletage and implant-edge transition zones.

Based on this intraoperative assessment, 130 cc of processed autologous fat was injected into the right breast and 100 cc into the left breast. This differential grafting strategy was used to individualize the final breast contour rather than applying an identical or predetermined volume to both breasts.

Postoperative Outcome

The postoperative course was uncomplicated. At the 3-month follow-up examination, the breasts demonstrated satisfactory volume, contour, and symmetry, with a smooth transition between the augmented breast and surrounding chest-wall soft tissue.

There was no clinical evidence of infection, clinically apparent capsular contracture, palpable fat necrosis, or clinically significant residual asymmetry. The patient was satisfied with the postoperative breast contour.

Discussion

Hybrid breast augmentation combines the predictable projection and volume provided by a breast implant with the contour-modifying properties of autologous fat grafting. Rather than considering implant volume and fat-graft volume as interchangeable components, the two modalities can be assigned different roles: the implant provides the primary structural volume, while fat grafting can selectively modify areas in which additional soft-tissue coverage or contour refinement is desirable.

Previous reports have shown that autologous fat grafting can be used in conjunction with breast implants to disguise implant edges, improve soft-tissue coverage, and create smoother transitions between the implant and adjacent tissues [1-3]. These considerations are particularly relevant in slender patients.

The patient described in this report had a BMI of 16.4 kg/m². With a limited soft-tissue envelope, the transition between a subglandular implant and the surrounding tissues may be more apparent. In this case, the implant was used to establish the desired central breast volume, whereas autologous fat was concentrated in the décolletage and around implant-edge transition zones to create a smoother contour.

An important feature of our approach was the timing of the decision regarding fat-graft volume. The final amount was not determined solely during preoperative planning. Instead, breast morphology was reassessed after the implants had been placed. The implant therefore served as the structural foundation of the augmentation, after which residual contour deficiencies could be directly identified and addressed.

This resulted in different graft volumes between the two breasts: 130 cc on the right and 100 cc on the left. The purpose of this asymmetrical fat distribution was not simply to increase total breast volume but to individualize the final contour according to the appearance of each breast after implant placement.

This approach may have practical advantages. Preoperative assessment can estimate where additional soft-tissue coverage will be required, but insertion of the implant changes the three-dimensional breast contour. Direct reassessment after implantation allows the surgeon to evaluate the actual implant-tissue transition and subsequently determine where and how much fat is required.

The inframammary approach was also selected according to the patient's preference regarding scar location. Although scar placement does not determine the fundamental hybrid concept, incorporating the patient's clothing habits and concerns regarding scar visibility represents an additional aspect of individualized surgical planning.

This report has several limitations. It describes a single patient and therefore cannot establish superiority over implant-only augmentation or other hybrid techniques. The follow-up period of 3 months is short and does not permit assessment of long-term fat retention, late capsular contracture, implant position, or long-term contour stability. Objective volumetric imaging was not performed, and fat retention was not quantitatively measured. Larger studies with standardized photography, volumetric measurements, and longer follow-up would be required to determine the reproducibility and long-term outcomes of this strategy.

Conclusion

Hybrid breast augmentation using subglandular implants combined with targeted autologous fat grafting provided satisfactory short-term contour in a markedly slender patient. In this case, placement of the implants before determining the final fat-grafting volume enabled direct intraoperative assessment of the breast contour. Selective grafting to the décolletage and implant-edge transition zones, with different volumes used for the right and left breasts, allowed the fat grafting to be individualized to the residual contour requirements of each breast. Intraoperative contour-guided fat grafting may therefore represent a useful practical strategy for tailoring hybrid breast augmentation, particularly in patients with limited soft-tissue coverage.

Declarations

Ethics Approval

This case report was reviewed and approved by the Ethics Committee of RINGO CLINIC.

Consent for Publication

Written informed consent for publication of the clinical information and accompanying clinical photographs was obtained from the patient.

Competing Interests

The author declares no competing interests.

Funding

No external funding was received for this work.

Availability of Data and Materials

All data relevant to this case are included in the article. Additional patient information is not publicly available in order to protect patient privacy.

Author Contributions

Y.N. performed the surgical procedure, collected and interpreted the clinical data, drafted the manuscript, and approved the final manuscript.

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Figures

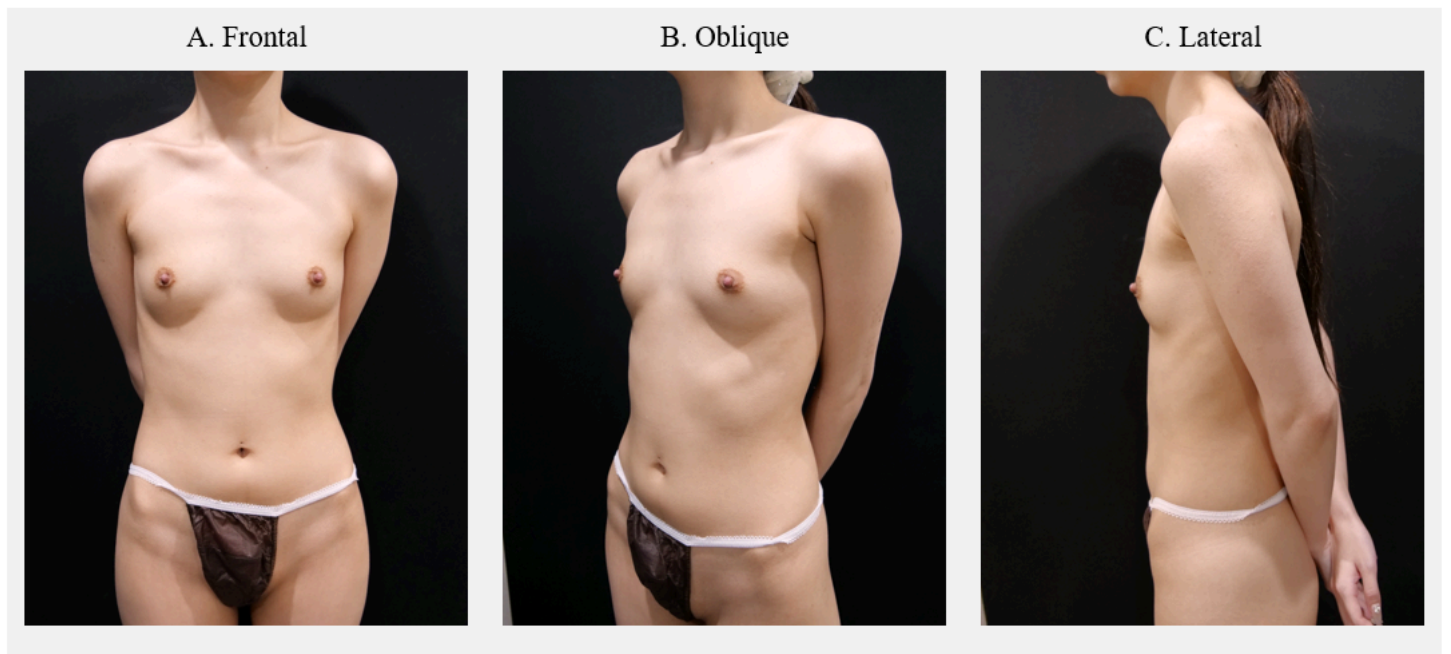


Figure 1

Preoperative photographs

Figure 1 shows preoperative photographs in frontal, oblique, and lateral views.

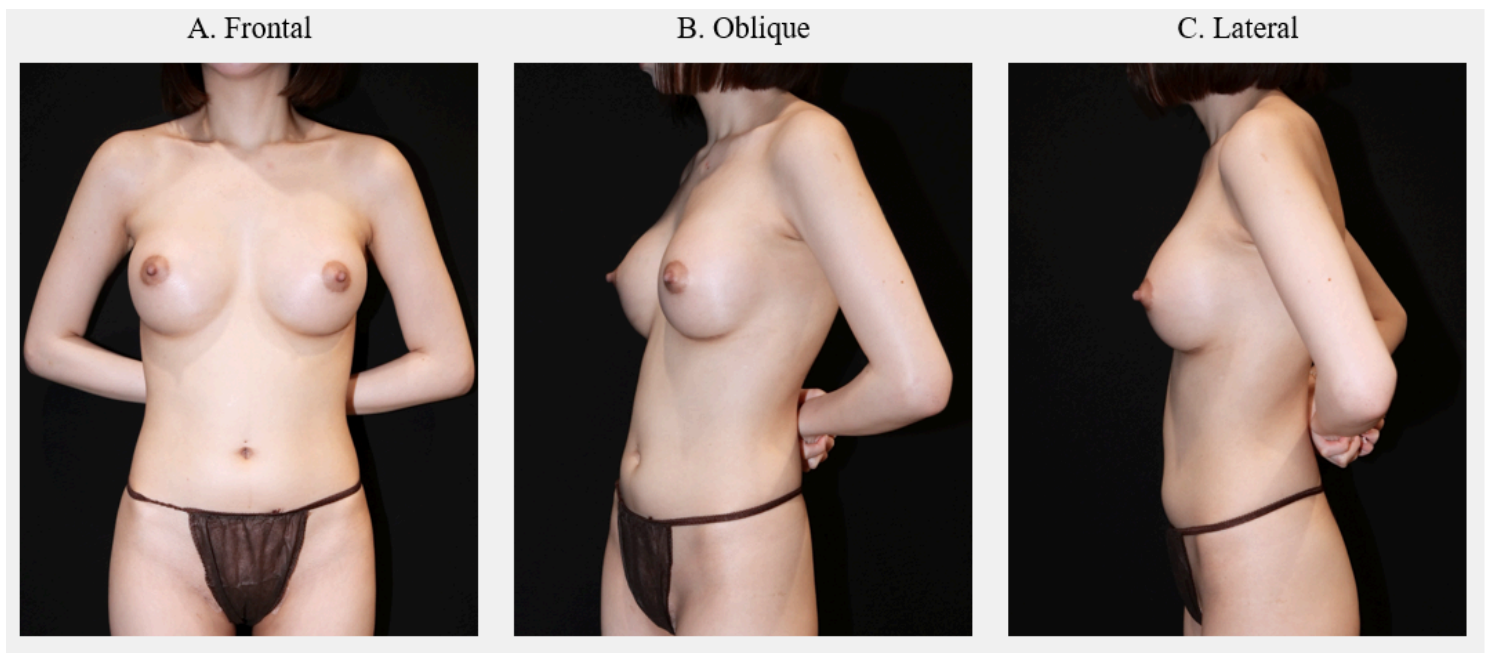


Figure 2

Three-month postoperative photographs

Figure 2 shows the corresponding 3-month postoperative photographs after bilateral 280-cc PERLE Moderate-profile implants placed in the subglandular plane and autologous fat grafting (130 cc to the right breast and 100 cc to the left breast), primarily targeting the décolletage and implant-edge transition zones.