Total Breast Reconstruction with Autologous Fat Transfer (AFT) & Expansion Reversal (ER): Single Center Experience with 2000 Consecutive Breasts Reconstructed with the AFTER Procedure

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Introduction

Autologous breast reconstructions with flaps provide excellent long-term patient satisfaction, but these in-patient invasive procedures have morbidities and complications. Reconstructions with AFT alone are limited because fat is not an expander. This limitation may be solved by pre-expansion of the mastectomy followed by AFT to the recipient laxity created by expansion reversal ER achieved by downsizing the implant.

Materials & Methods

For the immediate reconstructions, we insert subpectoral expanders and graft 100-150ml as individual fat ribbons teased in-between the exposed muscle fibers. After adequate post-operative expansion, we remove the expander and graft the expanded tissues with 200ml of fat and preserve the breast mound by inserting an implant half the expander size.

To convert the implant reconstructed to autologous fat, we remove the implant pre-expanded breasts and replace it with a 50% smaller one and graft the loosened tissues.

In both situations we repeat the procedure every three months till the patient is implant free.

Results

We reviewed 2000 consecutive breasts reconstructions performed with the AFTER procedure in our ASC. Non-radiated mastectomies required 3.2 sessions. At each session, the expanded breast volume remained constant as the intervening mastectomy tissue doubled while the implant volume halved. Radiated breasts took 5.8 sessions, with less grafting per session and less than halving implant size.

Patient satisfaction was very high, especially in implant to fat converted patients. Complications were minimal, more frequent in the radiated breasts and mostly due to over grafting or excessive scar release in cases with previous complications.

Conclusion

Despite our extensive experience with flaps, the AFTER procedure is our favorite breast reconstruction method. These out-patient procedures have minimal complications, the donor sites improve body contour, and our patients like it best.

Bilateral Mastectomies
Immediate reconstruction

Op#1 (mastectomy)
300 ml AFT injected in exposed muscle &
& 300 ml subpectoral expander inserted

Immediately after Op#2
300 ml expander exchanged for 170 ml implant + 300 ml AFT

Immediately after Op#3
170 ml implant removed
& 300 ml AFT + RAFT
Incision-free flap tissue recruited
No Implants, all fat.

2 years later…
Final outcome:
No implants,
No new incision,
All fat.
Improved body contour

Bilateral Mastectomies
550 ml Implants
Conversion to AFT

Implants removed through mid axillary incision:
Finger in cavity guides cannula to graft the skin/capsule plane.
Lipografter® allows practical, precise, one-handed grafting

3 months later…
Just prior to Op#2:
250 ml implants have replaced the 550 ml implants

3 months later…
130 ml implants have replaced the 250 ml implants

6 months later…
Final outcome:
No implants,
No new incision,
All fat.
Improved body contour

B Mastectomies
550 ml Implants
To NO IMPLANTS in 3 outpatient procedures.
1 year follow up
Improved body contour

B Mastectomies
450 ml Implants
To NO IMPLANTS in 3 outpatient procedures.
1 year follow up
Improved body contour
(No touch BBL)

B Mastectomies
420 ml Implants
To NO IMPLANTS in 3 outpatient procedures.
1 year follow up
Improved body contour
(No touch BBL)