Advances in Reconstructive Surgery after Mastectomy

Leonard Lu, MD
leonardlu@gmail.com
Plastic and Reconstructive Surgery
Advocate Condell Medical Center
Advocate Lutheran General Hospital
Statistics

- Increase in number of mastectomies (especially bilateral) in certain populations of women

- National Cancer Data Base
  - 12% of women for Stages 0-to-3 in 2012 vs 2% in 1998
  - Insurance coverage of breast reconstruction
  - Advances in plastic surgery
  - “Angelina” effect
Genetic Testing

- BRCA
- Prophylactic mastectomies
  - Healthier
  - No adjuvant treatments
Why have Breast Reconstruction?

- To make chest look balanced
- To regain breast shape
- To avoid a breast external prosthesis
- To be happier with their bodies and how they feel about themselves and relationships
Patient Questions

- Who is a candidate for surgery?
- Will breast reconstruction interfere with cancer treatment or detection?
- Are there some women who should not have a reconstruction?
- How does adjuvant therapy impact on reconstruction?
- How do you get the breasts symmetric?
- Does a breast reconstruction look and feel natural?
Goals

- Mound reconstruction
  - Size
  - Skin coverage
- Adjunctive procedures
  - Fat transfer
- Symmetry (contralateral breast)
- Nipple reconstruction
- Areola reconstruction
Timing of Surgery

- **Immediate**
  - Advantages: decrease the number of surgeries
  - Disadvantages: more upfront surgery
  - Start/Finish the reconstruction at the time of mastectomy

- **Delayed**
  - Advantages: less surgery upfront
  - Disadvantages: additional surgery, “being flat”
Advances in Reconstruction

- Methods to reduce scarring or improve contour
  - Skin sparing, Nipple sparing
  - Different incision patterns for mastectomies

- Methods to reduce the potential complications from the donor site by way of muscle-sparing flaps and perforator flaps

- The changing mindset and elevated standards for aesthetic outcomes, which has led to an increased number of procedures performed on the contralateral breast for improved symmetry
Nipple Sparing Mastectomies
Techniques

- Implants
  - Tissue expanders
  - Saline/silicone implants

- Autologous Tissue
  - Abdominal (DIEP, TRAM, SIEA)
  - Latissimus dorsi flap, TAP flap
  - SGAP, DCIA (Ruben’s), TUG

- Fat Transfer
Implants and Matrices

- More implant choices
  - Anatomic vs Round
  - Silicone (“Gummy Bear”)
  - Longevity
  - Safety
Acellular Dermal Matrix (ADM)

- Acellular Dermal Matrix (ADM)
  - Alloderm, Flex HD, Neoform, DermaMatrix
  - Prepectoral vs Subpectoral
Implants

- One step direct to implant (silicone)
  - Especially with nipple sparing mastectomies
  - Advantages: Minimizes number of surgery
  - Disadvantages: Predictability of results, revision rate, tension on skin
Direct to Implant Reconstruction
Tissue Expander Reconstruction

- Adjustable post-operatively with eventual implant exchange

- Advantages: corrects skin deficiency, predictability, enhanced results, off-load skin, choose size

- Disadvantages: multiple office visits and surgeries, discomfort, no MRI
Tissue Expander Reconstruction
Prepectoral Implant Placement

- ADM
- Less pain/recovery
- Soft tissue coverage
  - Palpability
  - Visibility
Prepectoral Implant Reconstruction
Autologous Tissue

- Corrects skin deficiency
- Normal subcutaneous tissue
- No foreign material/implants
- Longer operative time
- Higher morbidity
Abdominal Flaps

- TRAM
- DIEP
- SIEA
Abdominal Flap Reconstruction
Back Tissue

- Latissimus Dorsi Flap
  - Typically with implant

- Thoracodorsal Artery Perforator (TAP) Flap
Back Flap Reconstruction
Microvascular Flaps

- Superior Gluteal Artery (SGAP)
- Deep Circumflex Iliac Artery (DCIA, Ruben’s)
- Transverse Upper Gracilis (TUG)
Fat Transfer

- Soft Tissue Filler
  - Upper pole of breast
  - Fill in contour abnormalities
- Breast Reconstruction
Fat Transfer Reconstruction
Contralateral Breast

- Breast Reduction
- Breast Lift (Mastopexy)
- Breast Augmentation
Breast Reduction
Breast Lift (Mastopexy)
Breast Augmentation
Nipple Reconstruction

- Local Flaps
- Acellular Dermal Matrix
Areolar Reconstruction

- Tattoo
3D Tattoo

“Braless”
Questions?