A New Technique in Nipple Reconstruction: an Innovated Nipple Protector Following Two-Stage Modified Top-Hat Flap with Auricular Cartilage Struts

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Disclosure of Relevant Financial Interests

- Nothing to disclose

Inform Consent of Photo Release

- All patients in this presentation granted us permission to use their images for the academic purpose
Objective of The Study

- Build up a method to measure the neo-nipple accurately
- Introduce a new technique in nipple reconstruction:
  - Two-Stage Modified Top-Hat Flap with Auricular Cartilage Struts
  - Molded nipple protector
- Test the efficacy of the new technique
- Calculate the attrition rate of the neo-nipple
Materials and Methods

• 24 nipple reconstructions during 2010-2012 by two-stage modified top hat flap with auricular cartilage graft
• Following breast reconstruction in 14 autologous tissue and 10 expander-implant reconstructions
• Fitted nipple protector for 6 months
Two-stage modified top hat flap with auricular cartilage graft

• First stage
  – Bury cartilage struts (usually 6 in number) from ear in the lower dermis of delayed skin flaps

• Second stage
  – After 3 weeks, elevate the delayed skin flaps and the buried cartilage served as supporting columns in the wall of reconstructed nipples
Nipple protector

• After delicate procedures, we produced a transparent, elastic and strong enough to nipple protector against friction and compression
• The nipple protector should be worn for 6 months
Measure the volume of neo-nipple

- In post-operative 1, 3, 6 months
- After delicate procedure, we build a mold of neo-nipple by Copyplast®
- We measure the volume of the mold to get the exact volume of neo-nipple
Results and Conclusions

- All reconstructed nipples were viable
- 25% nipples with partial necrosis

- The shrinkage rate (3 months)
  - 15 to 20% in height
  - 31% to 44% in volume
CONCLUSION

- Provide a new method of nipple reconstruction by modified top-hat flap with auricular cartilage graft
- Provide an nipple protector benefits post-operative wound care and prevent the newly-formed nipple from compression
- Provide an accurate method to measure the neo-nipple
Thank you for your attention!