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TECHNICAL NOTE

Nipple reconstruction using rib cartilage strut in microsurgical reconstructed breast

Reconstruction mamelonnaire par soutien de greffon cartilagineux costal dans le cadre d'une reconstruction mammaire microchirurgicale

S. Guerid, F. Boucher, A. Mojallal *

Service de chirurgie plastique, reconstructrice et esthétique, université Claude-Bernard Lyon 1, hôpital de la Croix-Rousse, hospices civils de Lyon, CHU, 103, grande rue de la Croix-Rousse, 69004 Lyon, France

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Body image

Summary Nipple areolar reconstruction is the very last step of breast reconstruction. It is of outmost importance because it gives final appearance of breast, which is then better integreated by the patient in her body image. A lot of techniques are described to recreate nipple projection, from trompe l'œil tattoo to local flap, nipple sharing or autologous tissue graft. Common drawback of these techniques is nipple flattening with time, due to tissue atrophy. We present here a technique to use rib cartilage graft as structural framework for nipple reconstruction. Rib cartilage is stored in a pocked created in the groin during first step of breast microsurgical reconstruction. During nipple-areolar reconstruction, graft is cut at appropriate size and used inside a C-V flap to enhance nipple projection. Results show excellent symmetry and projection and is stable over time. Patients are very satisfied and can better integrate their new breast.

MOTS CLÉS
Reconstruction mammaire ;
Microchirurgie ;
Reconstruction mamelonnaire ;

Résumé La reconstruction du complexe aréolo-mamelonnaire est la toute dernière étape de la reconstruction mammaire. Elle est d'importance capitale car elle donne l'apparence finale du sein, qui sera ainsi mieux intégré par la patiente dans son schéma corporel. De nombreuses techniques sont décrites pour recréer la projection mamelonnaire, allant du tatouage en trompe l'œil à des lambeaux locaux, en passant par la greffe de mamelon controlatéral ou de tissu autologue. L'inconvénient commun à ces techniques est la perte de projection du mamelon avec le temps, dû à l'atrophie tissulaire. Nous présentons ici une technique de greffe de cartilage

* Corresponding author.
E-mail address: dr.mojallal@gmail.com (A. Mojallal).

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Greffe cartilagineuse ;
Image corporelle

costal comme élément de structure pour la reconstruction mamelonnaire. Le cartilage costal est mis en attente dans une loge créé au niveau du pli inguinal durant la première étape de la reconstruction microchirurgicale du sein. Lors de la reconstruction aréolo-mamelonnaire, le greffon est redimensionné et utilisé à l'intérieur d'un lambeau de type CV pour améliorer sa projection. Les résultats montrent une bonne symétrie et une excellente projection, stable dans le temps. Les patientes sont très satisfaites et peuvent ainsi mieux intégrer leur reconstruction.

Introduction

Breast reconstruction is nowadays a step in itself of breast cancer treatment. It is for the patient a very important phase as she can return to normal life again. Breast reconstruction can be of various types, with implant or autologous procedures. However, last step of any surgery is nipple reconstruction. This last step is of outmost importance for patient as it is the completion of the whole reconstruction path. Quality of nipple and areolar reconstruction is very important because integration to body image is far more easier when reconstruction is nice and natural [1,2]. Various techniques have been described from trompe l'œil tattoo to local flap, nipple sharing or autologous tissue graft [3,4]. Common drawback of these techniques is nipple flattening with time, due to tissue atrophy. This can be very disappointing for the patient, or even create real asymmetry in case of unilateral nipple reconstruction. The use of cartilage strut has been described to enhance nipple projection. During reconstruction time, a pocket is created in the reconstructed breast where rib cartilage is left until nipple reconstruction time [5,6]. The use of hard structure like cartilage allows for definitive projection as it acts like a hard scaffold.

We previously described breast reconstruction by means of DIEAP flap and thoracoabdominal advancement flap that we mainly use in our department [7]. This technique gives excellent results in terms of colour match and shape of breast but has the disadvantage of projection weakness of reconstructed breast. We therefore developed a technique that uses rib cartilage strut to maintain nipple projection in case of microsurgical breast reconstruction.

Technique

During microsurgical time, if internal mammary vessels are chosen, for unilateral or bilateral breast reconstruction, access is made by taking out rib cartilage. If contralateral nipple has less than six millimeters of projection and ten millimeters of width, which are for us the critical dimensions for nipple sharing technique, we keep this cartilage during first step of reconstruction procedure in a one-centimeter sub-cutaneous pocket done in the groin fold. Unlike

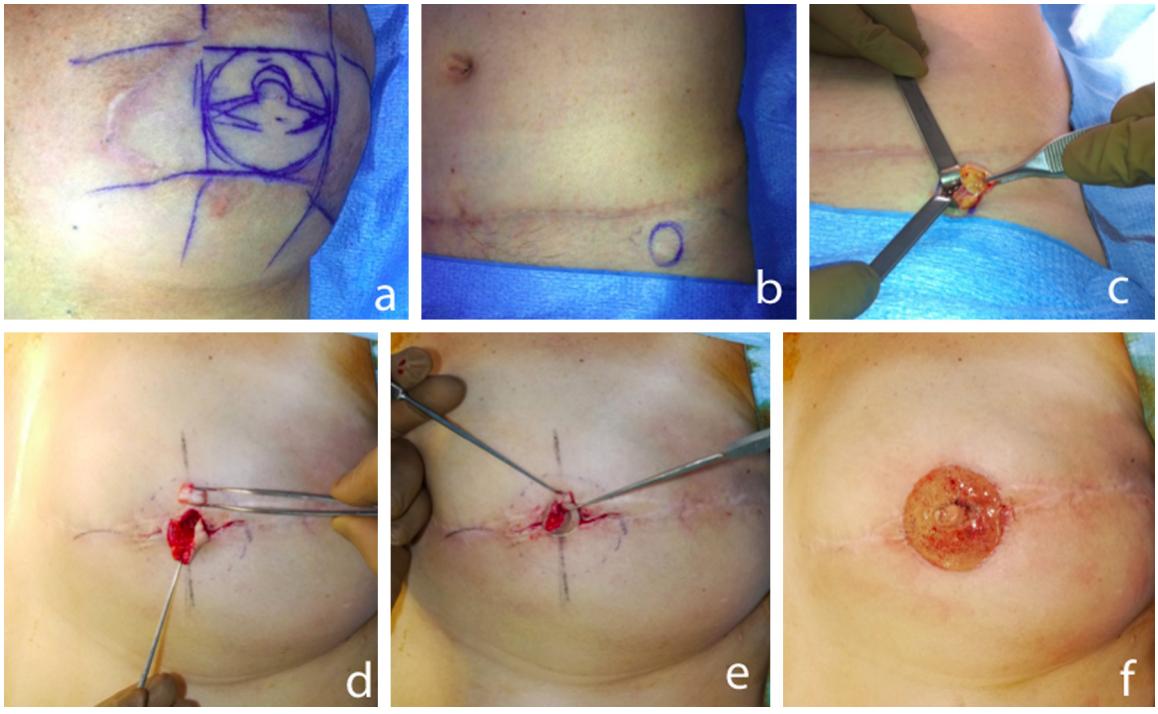

Figure 1 a: planning of flap and nipple localization; b: cartilage storage site; c: cartilage is taken out of groin pocket; d: cartilage graft is cut to appropriate size and dropped at the location of future nipple; e: flap is wrapped around cartilage strut; f: tattoing of the areolar region.