

HOW TO TAKE A MASTOID AND RETRO AURICULAR THIN SKIN GRAFT ¹

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INTRODUCTION

The thin skin graft comprises the epidermis until the dermic papillas, including a part of basal layer of epidermis. The cicatrisation will be accomplished beginning from the rest of the basal layer. The thickness of this graft is from 1.5 to 3 tenths of mm. The graft is obtained via a shaver or dermatome. Different donor sites are possible like the anterior or posterior side of the thigh, the external or internal side of the arm, the abdomen, the bottom, the back and the hairy skin (1-5), but they have some disadvantages, other operative field, or the color of the skin is different, or they leave an inesthetical scar.

In this paper, we suggest another donor site which is retro auricular and mastoid region. This donor site is very interesting for external or middle ear surgery (reconstruction of the external auditory canal or the tympanic membrane), but also for others surgeries of reconstruction when a thin skin graft is necessary.

OPERATIVE TECHNIQUE

1- General anaesthesia is administered with endotracheal intubation.

2- Positioning: The patient is in the supine position, the operative field is prepared using povidone (betadine) solution.

3- The retro auricular and mastoid region is infiltrated with physiologic serum 0.9%. Ten to fifteen CC are necessary, in order to get a plane area which includes the posterior skin of the pinna, the post auricular sulcus and the retro auricular skin (Photos 1, 2).



Photos 1 & 2:
Hydrotomy in order to get a plane area.

Photo 3

Summary: The mastoid and retro auricular thin skin graft has an excellent quality, and is easy to take. Technical aspect: An important hydrotomy should be done in the retroauricular sulcus to obtain a plane surface that goes from the posterior face of the pinna to the skin over the mastoid surface. This plane surface is the donor site and allows the harvesting with the electric dermatome. The characteristics of this graft are: The graft have the same color of the face, the same operative field, yielding an unremarkable scar in the donor site. The thickness is limited to 3 tenths of mm., and his size to 6x4cm approximately.

Key-words: Graft, thin skin, dermatome, external auditory meatus, stenosis, tympanic membrane lateralisation.

4- The region is dressed with vasoline (Photo 3).

5- The dermatome is adjusted according to the intended thickness.

6- The surgeon's assistant pulls the pinna anteriorly with his both hands (Photo 4).

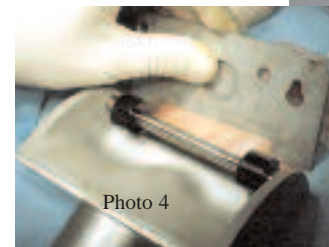


Photo 4

7- The dermatome must be manipulated tenderly, from behind forward keeping the same pressure in the direction of the harvesting. During the entire procedure, the inclination of the blade must be the same regarding the skin (Photos 5, 6, 7).



Photo 5

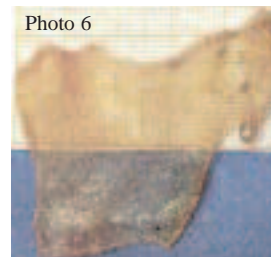


Photo 6

8- In case of an external canal or middle ear surgery, the operation is continued at the time. The postero-superior approach is then performed as usual directly in the donor site with a blade or a cautery (Photos 8, 9).

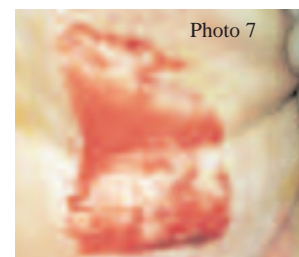


Photo 7

9- The dressing is made when the otological procedure is finished and the skin sutured. The retro auricular and mastoid region is dressed with vasoline, and a silastic shield is applied

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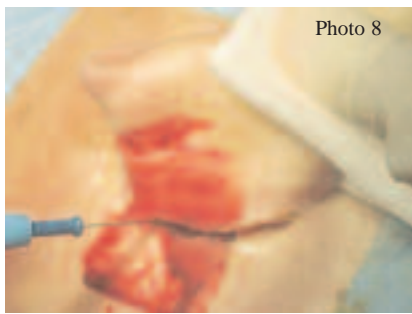


Photo 8



Photo 9

on the mastoid surface. A gauze dressing is applied followed by a head bandage (Photos 10, 11).



Photo 10

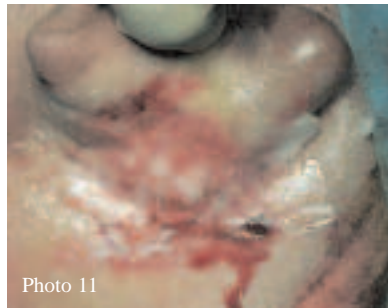


Photo 11

10- Eight days later, the donor site is healed and the dressing is not necessary anymore. A slight edema of the auricle is still present (Photo 12).

11- Fifteen days later, a redness of the donor site could be seen. It disappeared in some weeks and no scar could be seen after (Photo 13).



Photo 12



Photo 13

INDICATION

The indication is when a thin skin graft of 1.5 to 3 tenths of mm thickness is necessary, and when the size does not exceed 6x4 cm. This graft is interesting in some cases of external auditory meatus and middle ear reconstructions

ADVANTAGES

A graft with an excellent quality.

A rapid and a simple procedure.

Donor site and receiver sites are of the same color and on the same operative field for the surgery of the face.

Less bleeding thanks to the efficient infiltration of the physiologic serum in the retro auricular and mastoid region

The harvest of the graft doesn't prevent the otosurgery at the same time.

Unremarkable scar in the donor site.

DISADVANTAGES

Swelling of the auricle during a week due to the hydrotomy.

The thickness is limited to 3 tenths of mm. The size is limited to 6x4 cm approximately.

COMPLICATIONS

The complications are rare: Infection or granulation usually controlled by local treatment.

CONCLUSION

The thin skin graft of retro auricular and mastoid region is a graft of excellent quality and easy to harvest. The donor site and the receiver site are the same color and on the same operative field for the surgery of the face, yielding an unremarkable scar in the donor site.

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Titre : Comment prélever une greffe de peau mince rétro auriculaire et mastoïdienne

Résumé : La greffe de peau mince rétro auriculaire et mastoïdienne est une greffe d'excellente qualité, facile à prélever.

Technique : une hydrotomie importante est faite au niveau du sillon rétro auriculaire jusqu'à obtenir une surface plane allant de la face postérieure du pavillon à la peau située en arrière du sillon rétro auriculaire. C'est cette surface plane qui forme le site donneur, elle permet un prélèvement au dermatome électrique. Les caractéristiques de cette greffe cutanée sont : greffon de même couleur que le reste de la face, unicité du champ opératoire, absence de cicatrice au site donneur. L'épaisseur de cette greffe est limitée à 3 dixièmes de mm, et sa taille à 6x4 cm environ.

Mots clés : Greffe, peau mince, dermatome, sténose du conduit auditif, latéralisation du tympan.