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EDITORIAL OPEN ACCESS

Banking chondrocutaneous flap for the helical defect repair

Yusuf Kenan Coban

Helical defects less than 0.5x1 cm in diameter of auricle could be primarily closured and a visible size difference compared to unaffected ear may not be occurred. Bigger defects than above mentioned size may be corrected with posterior pedicled retroauricular flaps or autologous costal cartilage with local flaps. Antia and Buch used helical advancement flaps with other describing variations of this technique [1]. Using local tissue other than helical rim tissue for reconstruction has also been described. Most of these include use retroauricular hairless skin or close scalp tissues. Converse's tunnel technique involves incisions in the hairline and posterior auricular surface. Imahiyabo uses a much wider delayed interpolation postauricular flap extending into the hairline back further to mastoid scalp. This technique leaves scars in areas not acceptable to the patient [2, 3].

Flap banking is strategic maneuver that is used sometimes for warranting success of transfer. Either pedicled or microsurgical tissue transfer way has aimed a second elective definitive surgery in a more elective session. The reason for this maneuver may include lack of appropriate recipient donor vessels in emergency settings may drive surgeon to make another options or in developing child, transfer of pedicled flap may be better with two sessions [4].

Carved floating rib may not give a good join between construct and native cartilage. For eliminating this problem, some authors advice to use burr to have seamless joint. Other techniques that do not use autologous costal cartilage may simply use postauricular skin as a transposition flap in two sessions [5]. But this technique does not include any cartilage component within it. A simple rule in plastic surgery is repair with similar tissue could not be met in these cases. My technique is just fit to this rule, as helical rim consist of skin and cartilage components like cavum concha of auricle. Delicate tiny curvature of inner cavum cartilage with its outer skin resembles tiny helical curve in auricular rim region. So it is logical to use that similar tissue for the repair.

A posterior subcutaneous pedicled of conchal flap in diameter of 1x1.5 cm is elevated in the technique. The posterior skin wall of donor site at cavum concha is left untouched as intact wound bed and skin grafted. The flap is transposed to upper posterior border of the defect (Figure 1). In order not to hamper tiny circulation within the flap, it is left in place for a secondary revision. Direct transfer of such planned posterior pedicled chondrocutaneous flap may fail due to randomized subcutaneous circulation in the flap. Two months later, the flap is revised and adopted to the defect as a second stage operation. The revision includes trimming the edges of the defect, mini z platies at the edge of upper helical joint and a mini scapha cartilage reduction (Figure 2).

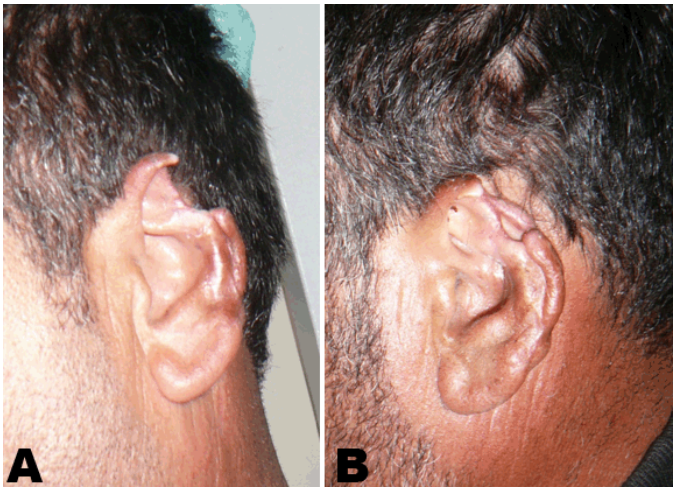

Figure 1: (A); 2x3 cm area of the helical rim of a male patient had gone to necrosis and a defect occurred secondary to debridement of necrotic tissue. The defect included helical rim loss with minimal antihelical component was 2x1 cm in diameter, and (B); Banked chondrocutaneous flap is seen at postoperative 1st month and just prior to second session of the transfer.

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Figure 2: After suture removal of second session of adopting the flap to native cartilage edge; note that a small reduction was made in scaphal antihelical area.

Banked chondrocutaneous flap is a simple procedure leaving a discrete donor site scar as well as it repairs helical rim defects with very similar tissue. Some visible color and surface area differences are possible with all retroauricular flaps. In the present technique, donor site scar was hidden in the cavum concha and remaining structure of conchal cartilage framework prevents any shrinkage or collapse of auricle, as only 1x1.5 cm of it is already used. In conclusion, mini auricular helical rim defects can be repaired postauricular pedicled flaps including conchal cartilage with its overlying skin and it may be banked for warranting the success of transfer.

Keywords: Auricle trauma, Chondrocutaneous flap banking, Helical defect

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Author Contribution

Yusuf Kenan Coban – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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