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피부암 절제 후 두 개의 초승달형 피판을 이용한 재건

(Reconstruction using two crescentic flaps after wide excision of skin cancer)

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Purpose: Skin cancers are common cutaneous malignancies. They involve various anatomical areas, including the face, neck, trunk, and extremities. To achieve optimal outcome, wide excision of the malignant lesion should be prioritized. When adjacent tissues are confirmed to be free of malignancy, an appropriate reconstructive procedure can be performed after pathologic examination. Reconstruction should preserve the natural contour and aesthetic appearance of the involved area. We performed reconstruction of skin and soft-tissue defects after wide excision of skin cancer using two crescentic flaps and report the postoperative outcomes herein.

Methods: From June 2023 to April 2025, we used two crescentic flaps to reconstruct skin and soft-tissue defects remaining after oncologic surgery. Two crescent-shaped flaps were created from dog-ear deformities after approximation of the adjacent tissues following wide excision. The crescentic flaps were then transposed to the defect, and the wound was repaired without excessive tension. Postoperative outcomes were evaluated on the basis of the healing process, tissue contour, and wound-related complications.

Results: Thirty-four patients underwent wide excision followed by reconstruction with two crescentic flaps. Transposition of the two crescentic flaps provided adequate coverage of the defects while preserving a natural contour. Five patients developed transient congestion in one of the two flaps; however, the congestion resolved within 10 days postoperatively. Additional geometric analysis using the amount of approximation, and the length-to-width ratio of the defect, showed the estimation of dissection for successful reconstruction.

Conclusion: Substantial tissue defects after wide excision of skin cancer require appropriate reconstructive options. Two crescentic flaps created from dog-ear tissue successfully covered these defects. Various reconstructive procedures can be considered after oncologic surgery for skin cancer, and two crescentic flaps may be one option because of their tissue efficiency and minimal donor-site morbidity.

Fig. 1. Sequential procedures of two crescentic flaps. The 78-year-old male patient presented with malignant melanoma on mid-back area. After wide excision with a 2cm safety margin, a large skin and soft tissue defect was noted. The upper and lower margins were approximated; however, a sausage-shaped defect remained with dog-ear deformities on both lateral ends. The redundant dog-ear tissue was used as a flap rather than discarded. The pedicles of the flaps were located approximately two-thirds of the distance from the center to the lateral end of the longitudinal wound **(black arrow).** The two flaps were transposed to cover the defect **(yellow arrow).** Because the crescentic flaps could be stretched without excessive tension, they met at the center of the defect. The flap margins and the donor sites from which the flaps originated were then repaired layer by layer to avoid excessive tension.

Fig. 2. The 90-year-old female patient presented with squamous cell carcinoma on the left dorsum of the foot. After wide excision with a 5mm safety margin, a large skin and soft tissue defect was noted. The proximal and distal margins were approximated; however, a sausage-shaped defect remained with dog-ear deformities on both lateral ends. The redundant dog-ear tissue was used as a flap. The two flaps were transposed to cover the defect**.** The crescentic flaps met at the center of the defect without excessive tension.