Repair of a Medial Cheek Skin Defect with an Island Pedicle Flap

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Dear Editor,

The island pedicle flap (IPF), or V-Y advancement flap, is a highly versatile repair method used in subcutaneous adipose tissue-rich areas of the face, including the nasolabial fold, upper lip, and cheek.[1] The term "island pedicle" is preferred because the flap is completely dissected from the surrounding skin and receives its vascular supply from the central subcutaneous part (Figure 1). IPF is relatively simple to design and operate. It is also more mobile than other advancement flaps because there are no dermal or epidermal connections.[2] In this report, we emphasize the use of IPF in dermatologic surgery through a case of basal cell carcinoma in the medial cheek.

A 72-year-old man presented with a 1.5x2 cm biopsy-confirmed basal cell carcinoma. The lesion was located in the left medial cheek adjacent to the nasolabial fold (Figure 2A). After determining the appropriate surgical margins, we decided to repair the defect with IPF because the area was rich in subcutaneous fat and the incision lines could be hidden in the nasolabial fold (Figure 2B). The flap was designed in a V-shape with a peak angle of 30°. Before the operation, written informed consent was obtained from the patient. The procedure started with infiltration anesthesia and the removal of the lesion (Figure 3A, B). After tumor removal, hemostasis was achieved with electrocautery (Figure 3C, D). The flap was then created by incising through the epidermis and dermis to the subcutaneous fat along the designed V-shape (Figure 3E-H). Wide undermining using scissors was performed around the flap (Figure 3I, J). The proximal and distal edges of the flap were also sufficiently dissected to allow mobilization (Figure 3K, L). Narrowing the island pedicle allows greater

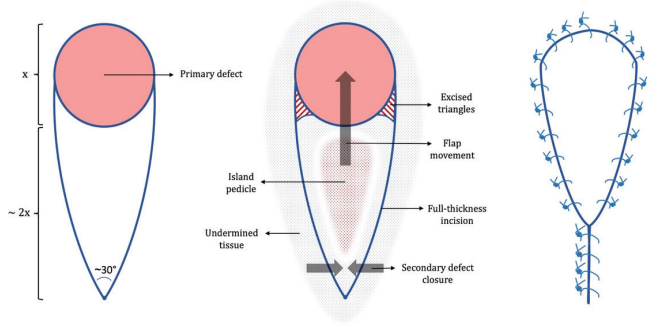

Figure 1. Schematic illustration of the IPF procedure. (A) Design of the V-shaped flap. (B) Movement of the flap and preservation of the vascular island pedicle. (C) Final Y-shaped suture lines
IPF: Island pedicle flap

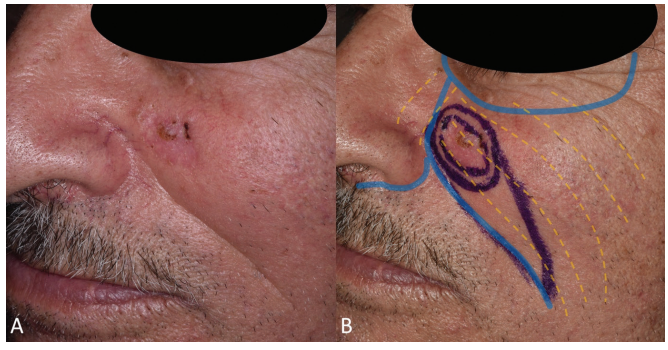

Figure 2. (A) Clinical appearance of the lesion before surgery. (B) The upper incision was aligned parallel to the skin tension lines (dotted yellow lines), and the medial and lower incisions were placed along the natural creases (bold blue lines)

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mobilization but also risks vascular supply. Therefore, care was taken to preserve sufficient vascular base. After achieving the desired mobility, the flap was easily moved into the primary defect without any tension (Figure 3M, N). The corners of the flap were rounded at this stage to better fit into the circular defect. Finally, the flap was fixed in place with subcutaneous sutures, and the procedure was completed by placing epidermal sutures (Figure 3O, P). The final suture lines appeared as a Y-shape. No complications occurred, and the scar became almost invisible at a 3-month postoperative period (Figure 4A, B).

IPF is a frequently used flap in dermatological surgery and has several advantages. First, the design of the flap is simple and does not require complex measurements. The color and texture compatibility are excellent because the donor site is adjacent to the defect. The blood supply is robust, and the flap is viable as long as the vascular pedicle is preserved. The lack of skin attachments significantly increases the mobility of the flap.[3] Finally, it has been shown that repairing medial cheek defects with IPF provides reliable functional and cosmetic results.[4] In conclusion, IPF remains a viable option for the repair of medial cheek skin defects.

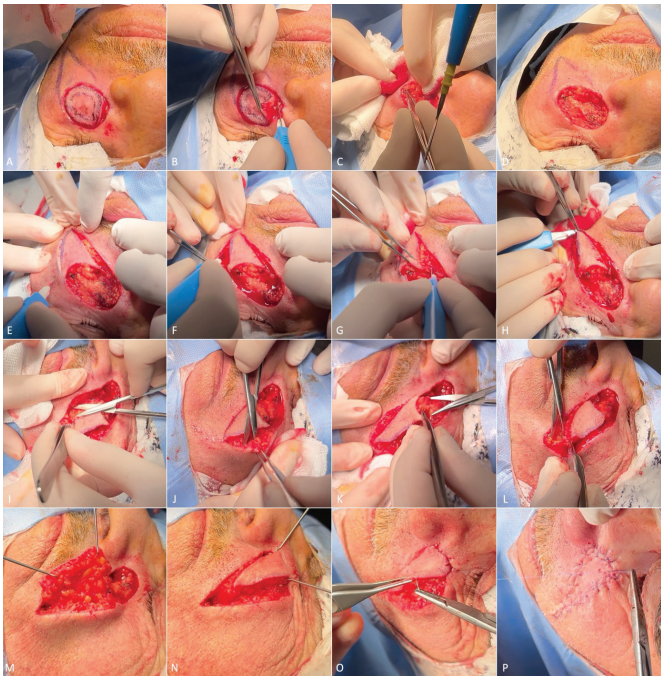

Figure 3. Stages of the IPF procedure. (A-D) Removal of the tumor and hemostasis with electrocautery. (E-H) Full-thickness incision deep into the subcutaneous fat. (I-L) Wide undermining around the flap and release of the proximal and distal edges. (M-P) Sliding of the flap into the defect and layered closure

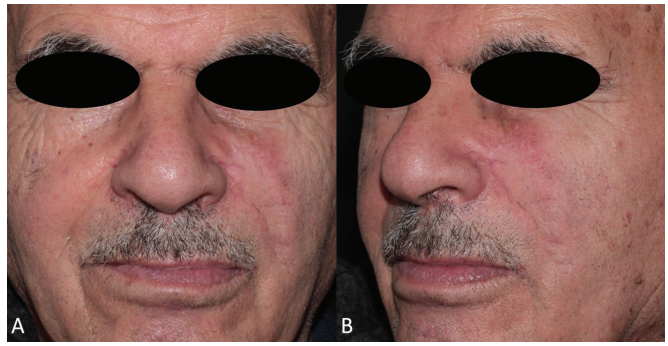

Figure 4. Clinical appearance at the postoperative 3rd month. (A) Anterior and (B) oblique views show minimal scarring and no distortion

Ethics

Informed Consent: Before the operation, written informed consent was obtained from the patient.

Authorship Contributions

Surgical and Medical Practices: O.E., K.A., A.S.Ş., Concept: O.E., Design: O.E., Data Collection or Processing: O.E., Analysis or Interpretation: O.E., Literature Search: O.E., A.S.Ş., Writing: O.E., K.A., A.S.Ş., M.S.G.

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