

Reconstruction with Rotation Flap of Infraorbital Dextra Basal Cell Carcinoma

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Keywords: Basal cell carcinoma, dermoscopy, histopathology, rotational flap

Abstract: Basal cell carcinoma (BCC) is the most common cancer with an incidence rate approximately 70-80% among all skin malignancies. BCC in the head and neck usually presents as slow growing, well-defined, papule or nodul. It is locally destructive lesion and could cause serious disfigurement. However, the case of metastasise rarely occurred. Nevertheless, various treatments are available, in which the surgical excision is found to be the most effective one. Unfortunately, in facial area, any tumor excision may be aesthetically detrimental, therefore difficult to restore. In such case, the use of local flap such as rotational flap, is the standard option for reconstuction. This paper is to report a case of infraorbital dextra basal cell carcinoma with rotational flap as the reconstruction method. Reconstruction with rotational flap technique on infraorbital region give a good outcome and easy to learn with a minimal time and give an aesthetically good result.

1 INTRODUCTION

Basal cell carcinoma (BCC) is derived from the non-keratinizing cells originating from the basal layer of the epidermis. BCC generally characterized by slow growth, minimal soft tissue invasiveness and a high cure rate. However, in certain occasion it could derive an agressive form causing deep tissue invasion with regional or distant metastasis and potentially recurrence. It commonly located in the facial region, whilsy seldom occurred in the area of limbs and trunk.

Correspondingly, the management of BCC is guided by the anatomic location and the histological features. As for the treatment, it consists of the surgical and the non-surgical procedure. The surgical therapy includes standard excision, Mohs micrographic surgery, and cryosurgery (Carucci, 2012), (Madan, 2016). Surgical excision of tumors from the face may create a defect that is difficult to restore. Sometimes excision of all tumors requires closure of wounds caused by an excision known as a flap. Flaps are commonly classified according to their primary movement as advancement, rotation transposition, or interpolation. The use of regional flaps like rotational flap are very useful and versatile local flaps (Seehan, 2012), (Cook, 2005).

2 CASE

A 43-year-old woman presented with hyperpigmented nodule on infraorbital dextra since two years ago. The nodule gradually became enlarged and itchy. Approximately 1 year ago, hyperpigmentation nodule got bigger, and easily bleed even with a gently touch. From the edge of the nodule, few ulcers also arised. During physical examination, the generalized status was within normal range. The findings in Dermatologicus status from infraorbital dextra region: hyperpigmentation nodule, size 1.8 x 0.9cm, solitary, irregular, ulcerated plaque and rolled out edges. The multiple blue gray globules and ulceration were found in the two images obtained by the Dermoscopy examination. While as for laboratory examination yielded normal. Histopathological examination was found nodulo infiltrative based on growth pattern including aggressive BCC. The incision in the margin area was not free from tumor. The patient treated with in toto excision followed by rotational flap reconstruction. Patients were given systemic drugs, cephadroxil dose of 500mg every 12 hours for 7 days and mefenamic acid dose of 500mg every 8 hours after surgery.

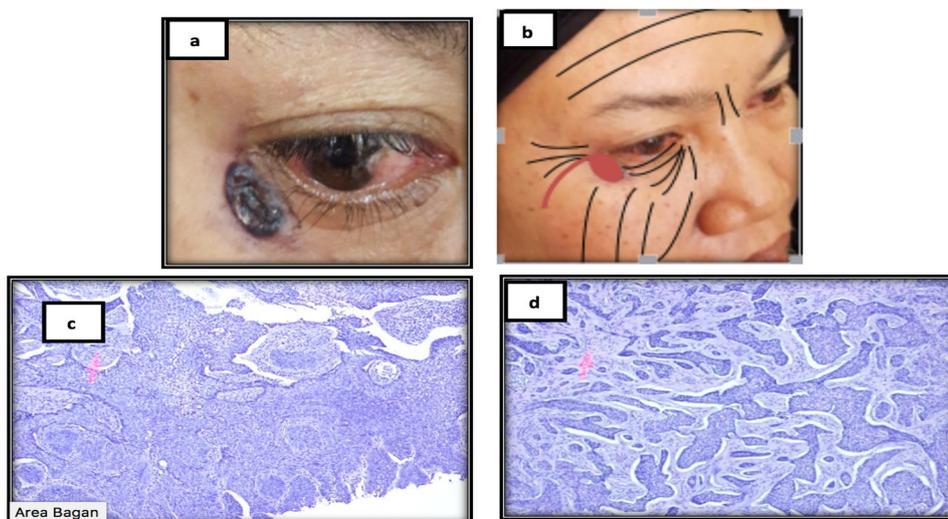


Figure 1: a,b) Location of the tumor c,d) histopathological examination.

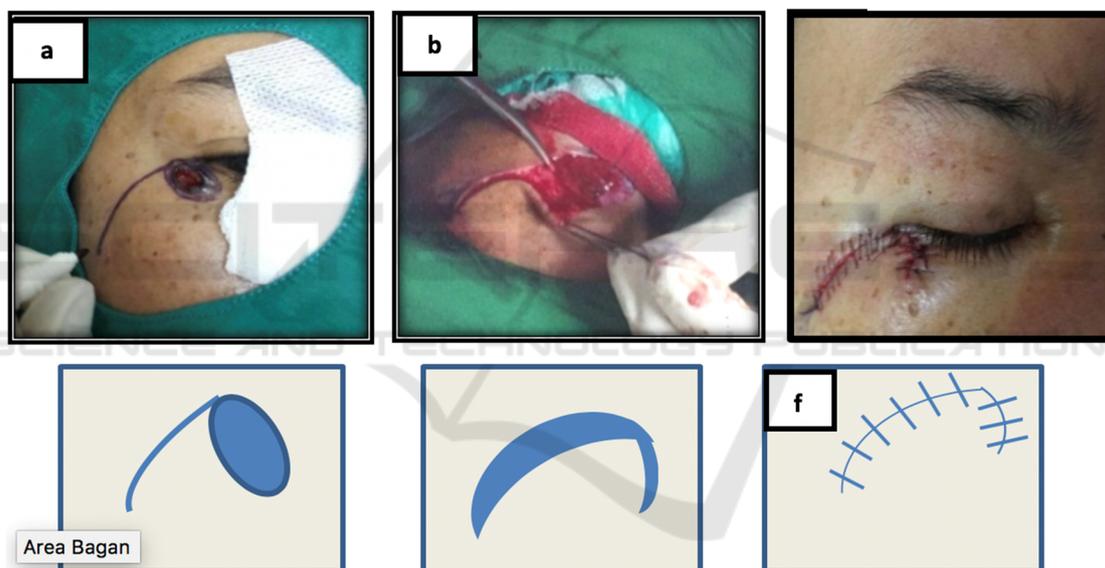


Figure 2: a) Sketch of rotation flap pattern. b) In toto excision c) Post wound suture excision with rotation flap. d,e,f) Rotation flap with simple curved design from the primary defect. The rotating end portion is located shorter than the primary defect that flap will cover the furthest edge of wound if the flap edge is expanded with secondary defects.

3 DISCUSSION

Basal cell carcinoma includes non-melanoma skin cancer which is a malignant skin tumor originating from stem cells in the basal layer of the epidermis and a small part originates from the outer layer of unit pilosebacea root sheath.⁶ According to Moore GM (2012) retrospective study, the incidence of BCC is more frequent among Caucasian race. The trend of skin cancer in Asia shows that BCC increase most

often at the age of more than 60 years of old (Moore, 2012).

Diagnosis of this case based on clinical features, dermoscopy and histopathology examination. In the clinical features corresponded to the nodular type BCC. Nodular type cell BCC is the most commonly found variant with clinical features of dome shaped, translucent, and pearly edges spread to the periphery. Nodular type basal cell carcinoma is common in the head and neck. Histopathologic examination shows

nodulo infiltrative based on growth pattern including aggressive BCC.

BCC on the facial region may yield higher degree of subclinical spread compare to tumor's arising elsewhere. Generally, the cosmetic outcome for the standard surgical excision is quite satisfying. However, the lesion removal procedure in which a significant excision on the margins area needed, could caused an alarming tissue losses. Special attention therefore needed to avoid further damages, for functional and cosmetic importance, to certain locations in the facial region such as the periocular, perioral and perinasal areas (Jadotte, 2010). In the current presented case, the location of the tumor was in the infraorbital dextra, which is considerably a difficult area. Therefore, the flap selection after surgery should be adjusted to avoid the lid retraction as the aftermath.

Additionally, there are several schematic classifications for flap surgery. The Flap is categorized based on the blood vessels supply (random or axial), primary motion (advancement, rotation, transposition), configuration (rhomboid or bilobed) and location (local or distant) (Cook, 2005). Rotational flap include rotation movement flap. Rotational flap is flap tissue that transferred over an area of unaffected skin to reach defect (Chen, 2009).

The procedure of surgery include preoperative, operative and postoperative. The preoperative planning include examine the patient in the upright position in both static and dynamic situation. Flap design with consideration of aesthetic boundaries, relaxed tension line and decision margin excision. In this case wound closure using rotational flap. Flap design was done as preoperative procedure.

There are several principles in the Flap, namely, 1) primary defect; is the post tumor removal wound which intended to be closed while also acted as the recipient from the subsequent skin-flap. 2) Secondary defect; is the Flaps' procreated wound. It derived from the incision and removal of the surrounding skin layer and the subcutaneous tissue, to overlay the primary defect (thus called the donor) 3) the primary flap motion is the displacement movement that will be placed above to cover the primary defect. 4) Secondary movement is the displacement movement that is placed into around tissue of primary defect using flap (Cook, 2005).

The surgical field should include the contralateral aspect of the surgical wound (i.e. the entire face should be prepped in the usual sterile fashion). This will allow the intraoperative assesment of flap movement on tissue symmetry and free margins. BCC with diameter less than 2 cm, approximately 85%

successful removal of all tumors with margin excision 3 mm while 95% with margin excision 4-5 mm (Madan, 2016), (Abullarade, 2013). Undermining should be performed to release vertical and pivotal tissue restraint and elasticity and the plane of flap elevation and undermining should match the wound depth closely.

In this case wide local excision with 3mm margin was carried out to prevent recurrences. Rotational flap was done to maintain function and physical aesthetic post operative. The rotating end portion is located shorter than the primary defect that flap will cover the furthest edge of wound if the flap edge is expanded with secondary defects. After the incision, the undermining was done with blunt scissors that made the flap easily rotated towards the wound. Triangular sutures are done on the end flap and the donor tissue. Finally, the lateral initiation line is sutured in interrupted while the cranial side lines are sutured with the continuous suture.

Post operative care after flap reconstruction is similar for other wound. A pressure dressing, include ointment should be applied over the flap. The initial dressing should be removed after 24-48 h, the area cleaned and a dressing of ointment and tape reapplied (Chen, 2009). In this case dressing include ointment applied over the flap.

4 CONCLUSION

We reported BCC cases with nodular infiltrates type in 43 years old woman. The BCC is treated with the toto surgical excision with the rotational flaps. The rotational flap technique can close the primary defect seamlessly while at the same time causing less lesion' tension. In the histopathologic examination, the nodulo infiltrative BCC is found, with the none-free margin therefore required more observation.

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