Role of Dermatovenereology in Environmental and Occupational Health

Program Book & Abstract

Yogyakarta, October 23-26, 2013
THE SAHID RICH JOGJA HOTEL
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ADVANCEMENT FLAP FOR CLOSURE OF BASAL CELL CARCINOMA DEFECT: THREE CASES REPORT

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Introduction. Basal Cell Carcinoma (BCC) is the most frequent type of cancer found in human. The face, head, neck, and arms are most commonly affected by BCCs. Surgical excision is one of the primary treatment modalities. BCC goal treatment is to eradicate the tumor such that the likelihood of recurrence is as low as possible.

Cases. Three patients underwent excision of BCC (2 women and 1 man) under local anesthesia and using advancement flap. The technique was H-flap wide excision, U-flap, and V-Y flap Modified Mohs Micrography Surgery. The average age was 60.

Discussion. The advancement flap to be the gold standard for the repair of extensive anterior cheek and lateral nasal sidewall defects. Advancement flap is the simplest flap technique. U-flap is useful for defects of the nasal and incision lines can easily be oriented to fill natural folds. H-flap is commonly used to repair defects on the forehead within the eyebrow. The V-Y advancement flap is created by initially making a V-shaped incision and advancing the triangular portion of the flap in a straight line toward its base. The wound is closed in the shape of a Y.

Keywords. Basal cell carcinoma, advancement flap

CHRONIC ULCERS CAUSED BY ACINETOBACTER CALCOACETICUS SPP WITH THE ADDITION OF OXYGEN AS WOUND CARE: A CASE REPORT

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Introduction. Ulcers on the skin is a pathological state of skin tissue discontinuities (epidermis and dermis) in a relatively long time and lead to tissue reaction. Failure in healing or interruption in the healing process is called chronic ulcers. Laboratory tests, microbiology examination and culture to support diagnosis chronic ulcers. Antibiotics and wound care with oxygenation can be performed in the treatment of chronic ulcers.

Case. A woman 42 years of part Surgical Unit Hospital with complaints of injuries since 2 month ago. Looks ulcers with erythematous hyperpigmentation edge size of 5 x 3.5 cm in dextra mammary area, and the size of 4x3 cm on the left breast area, size 4x2 cm, 7x2 cm in dextra inguinal area, and the size of 3x1.5 cm on the left inguinal area. Routine laboratory tests, microbiological examination and culture, chest x-ray examination of PA, CT Sc.

Discussion. Long standing ulcer with wide areas causing longer healing process, can be colonized by gram-negative bacteria. Culture sampling is used to identify the resistant organisms and appropriate antibiotic treatment. Laboratory tests found leukocytes increased, microbiological examination and culture on gram-negative bacilli bacteria found Acinetobacter calcoaceticus which sensitive to certain antibiotic. Treatment was given ceftazidim and wound care is done with compress of 0.9% NaCl and 0.1% undecyclenaminopropyl betaine showed less improvement, after the addition of oxygen 10-20 min/kg for 15 minute gives a good ulcer healing.

Keywords. Chronic ulcers, Acinetobacter calcoaceticus, oxygen
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Introduction. Basal Cell Carcinoma (BCC) is the most frequent type of cancer found in human. The face, head, neck and arms are most commonly affected by BCCs. Surgical excision is one of the primary treatment modalities. BCC growth treatment with 5-fluorouracil eradicating the tumor is not eradicated by surgery. The likelihood of recurrence is as low as possible.

Cases. Three patients underwent excision of BCC (2 women and 1 man) under local anesthesia and using advancement flap. The technique was a H-flap wide excision, U-flap and V-Y flap. Modified MohsMicrography Surgery. The average age was 60.

Discussion. The advancement flap is the gold standard for the repair of extensive anterior cheek and lateral nasal sidewall defects. Advancement flap is the simplest flap technique. U-flap is useful for defects of the nasal and incision lines can easily be oriented to fit natural folds. H-flap is commonly used to repair defects on the forehead within the eyebrow. The V-Y advancement flap is created by initially making a V-shaped incision and advancing the triangular portion of the flap in a straight line toward its base. The wound is closed in the shape of a Y.

Keywords: Basal cell carcinoma, advancement flap

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Case. A woman 42 years old at the Surgical Unit Hospital with complaints of injuries since 2 months ago. Looks ulcers with symmetrical hyperpigmentation edge size of 5 x 3.5 cm in the outer ear area, and size of 4x3 cm on the left breast area, size 4x2 cm, 2x2 cm in the outer inguinal area, and the size of 3x3 cm in the left inguinal area. Routine laboratory tests, microbiological examination and culture, chest x-ray examination of PA, CT-Sc.

Discussion. Long standing ulcer with wide areas causing longer healing process can be colonized by gram-negative bacteria. Culture sampling is used to identify the resistant organism and appropriate antibiotic treatment. Laboratory tests found leukocytes increased, microbiological examination and culture or gram-negative bacilli bacteria found "Acinetobacter calcoaceticus" which sensitive to certain antibiotic. Treatment was given coxtadidin and wound care is done with compress of 0.9% NaCl and 0.1% undecenaminapropyl betaine showed loss improvement, after the addition of oxygen 10-20 mmHg for 15 minutes gives a good ulcer healing.

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Introduction
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INTRODUCTION

Basal cell carcinoma is also called as basal cell carcinoma, Rodent ulcer, Rodent carcinoma, basal cell cancer, basalioma, and Epithelioma basoscellulare. Basal cell carcinoma (BCC) is a malignant tumor most often found in the skin and usually do not metastasize, slow growing, invasive, and locally destructive, especially on the head, face and neck.\(^1,2\)

Basal cell carcinoma most commonly developed at old age whose frequency increases at age 50. In the United States, an estimated of 1 million new cases occur in each year. The incidence of basal cell carcinoma is estimated to increase 10% per year in the world and mostly are affected the white people (30%) and the recurrence rate reaches 40-50% in 5 years.\(^2,3\) The most significant causative factor is exposure to ultraviolet light for a long period and especially on the head, neck, and most often on the nose which account for about 20.9%.\(^2,4\) From the investigations carried out in Indonesia there are predilection that is most often 50% on the cheeks and forehead, on the nose and nasal folds of 28%, eyes and vicinity of about 17%, and 5% on the lips.\(^5\)

General description for a basal cell carcinoma lesions are translucent surface, ulceration which surrounded by erythema and telangiectasias, but the lesion’s characteristics differ depending on the type of the lesion.\(^2\) A variety of basal cell carcinoma’s shapes include superficial, pigmented, noduloucerative (rodent ulcer), fibroepithelioma and morphoeform (infiltrative scar-like).\(^2,6\) Basal cell carcinoma occurred more frequently in the head and neck region, especially in the facial area. The type of morphea more frequently arise on the face, while the superficial on the chest. And rarely found on the palms and feet.\(^7\)

Therapeutic modality selection purposes of the basal cell carcinoma is for removing the tumor completely so that it doesn’t proliferates anymore and also provide the best cosmetic results. Currently there are few therapeutic modalities for basal cell carcinoma, either nonsurgical therapy or surgical therapy.\(^7,8\) Non-surgical treatment options consist of topical therapies (imiquimod, 5-fluorouracil), photodynamic therapy and radiotherapy.\(^9,10\) Those
Therapy destructed the tumor without histopathological control. Surgical therapy consists of surgical excision, curttage, electrodessication, and cautery, cryotherapy, and Mohs micrographic surgery (MMS). (2, 7, 11)

Reported three cases of basal cell carcinoma with surgical treatment and defect closure with advancement flap technique.

CASE 1

A 77 years old woman, complaints of injuries suffered in the left forehead since ± 1 year ago, initially the lesions are in the form of small lumps like moles which gradually enlarged. The bumps sometimes felt itchy and painfull and sometimes bleed, especially when exposed to trauma. Physical examination showed a good general condition and vital signs within normal limits. Lesions formed of blackish plaque, accompanied by an ulcer in the center of the lesion, sized of ± 1.8 x 1.5 cm with an irregular and demarcated edges in the frontal region (Figure 1).

![Figure 1. Lesions formed of blackish plaque, the lesion sized of ± 1.8 x 1.5 cm with an irregular and demarcated edges.](image)

Results of laboratory tests obtained of routine blood, bleeding and clotting time within normal limits, there was no history of systemic disease and were not taking medication and had no history of keloids.

Histopathological examination showed that the epidermis tissue preparations contained underneath malignant cells nests from the origin of basal cell with basaloïd form and hiperchromatic core, prominent nucleoli, pleomorphic with the edges structured palisading. (Figure 2)
Case 2

A 63 years old woman, complaints of injuries suffered in the nose since ± 5 years ago, initially the lesions are in the form of small lumps like moles which gradually enlarged. The bumps sometimes felt itchy and painful and sometimes bleed, especially when exposed to trauma. Patient has a diabetic history.

Physical examination showed a good general condition and vital signs within normal limits. Lesions formed of macule hyperpigmentation, sized of ± 3.5 x 3 cm rough surface and irregular edges. (Figure 4)
Lesions showed macula hyperpigmentation, rough surface and irregular edges.

Histopathological examination showed malignant cells basaloid atypical.

Histopathological examination showed that tissue preparations contained malignant cells basaloid atypical and hyperchromatic core, prominent nucleoli, pleomorphic with the edges structured palisading. (Figure 5)
CASE 3

A 37 years old man, complaints of injuries suffered in the right cheek since ≥ 6 year ago, initially the lesion was a tiny bump which then burst leaving a wound. The bump sometimes felt itchy and painful and sometimes bleed, especially when exposed to trauma.

Physical examination showed a good general condition and vital signs within normal limits. Lesions formed of blackish plaque, accompanied by an ulcer in the center of the lesion, sized of ≤ 2 x 3 cm with an irregular and demarcated edges in the facial region. (Figure 7)

Figure 7. Lesions showed ulcer with irregular edges and dirty ulcer base
Figure 8. Histopathological examination showed basoloid nests with the edges structured palisading.

Histopathological examination with punch biopsy showed basoloid nests with the edges structured palisading widen to the dermis. (Figure 8)

Figure 9. The V-Y advancement flap for the closure the defect. A. Defect after modified Mohs micrographic surgery. B. Design of flap. C. The flap was undersized. D. Each flap was advanced into the defect by suturing. E. The repaired defect after epidermal suturing. F. The repaired defect after suture removal 3 weeks postoperatively.
Discussion

Basal cell carcinoma is a malignant unkeratinized cells derived from epidermal basal cells. (2) Basal cell carcinoma is the most common skin cancer in humans, that are generally slow growing and rarely metastasize but it can make a severe damage locally if ignored or did not receive adequate treatment. (2, 7) The incidence of basal cell carcinoma is more common in the elderly aged over 60 years, but currently the frequency at age younger than 50 years is increasing. (12) Basal cell carcinoma has a typical distribution, most are around the nose (20.9%), face (17.7%) followed by upper extremity, trunk and lower extremities. (12, 13)

There are geographical variations that affect the risk of skin cancer, including basal cell carcinoma, but not too affected than the squamous cell. (14) The incidence of basal cell carcinoma is higher in regions with climate that is not too hot and get some sun exposure intermittently or not continuous and lasting chronically. (3, 14)

Nodular basal cell carcinoma is the most common form, occurs in sun-exposed areas such as head and neck, appears like a translucent papule or nodule depending on the duration of the lesion, also we can found telangiectasia, have an increasing limits, more widespread lesions with central necrosis often called rodent ulcer. pigmented basal cell carcinoma is a subtype of nodular basal cell carcinoma which accompanied by increased melanization so that appears translucent papules or nodules, hyperpigmentation which consists of a brown or black pigment. (3)

Many factors must be evaluated before determining the most appropriate treatment method. Cure rates of selected therapeutic modalities, the experience and skills of physicians and medical expenses must be considered. The goal of treatment is eradication of the tumor and reduce recurrence rates as low as possible. (15)

Conventional excision surgery was selected for due to consideration of the tumor size <2 cm, histopathologic picture of non-aggressive type (nodular type), demarcated tumor, in addition, the efficacy is more simple by using postoperative histopathology control, which is a technique that often used and appropriate with primary basal cell carcinoma. (6, 11) Mohs micrographic surgery is the treatment of choice for recurrent tumors, tumors sized of larger than 2 cm, and tumors located in areas known to have a higher recurrence which includes the H zone, demarcated tumor, previously received radiotherapy, with a histopathologic picture of aggressive growth (morpha type, infiltration), and perineural invasion. (1, 2)
This advancement flap term came from the primary movement. In advancement flap, the tissue movement "advanced" (promoted) in a straight line from the donor to the recipient. Letters of the alphabet formed from the incision (eg M-plasty, H-plasty, U-plasty, A-T plasty and V-Y plasty) further determine the basis of advancement flap. Conceptually, Advancement flap is the simplest flap of all repairs using the flap. In this technique the flexibility of the tissue itself and undermining under the skin. This type of flap is often useful on the forehead, eyebrows, cheeks, dorsum of the nose, lips and neck.

Synonyms for H-plasty include the double-U, double tab, or double advancement flap. This flap is usually used to repair defects in the forehead, down to the eyebrows, because this technique allows part of the hairy eyebrow left brought closer to avoid alopecia, and on the upper lip. The U-flap, also known as the trapdoor flap, or single advancement flap, is one of the simplest flaps to use because the geometric pattern and incision lines can easily be oriented to fit natural folds. In general, this flap should have a length-to-width a ratio of no more than 3:1 in order to maintain sufficient vascular supply to nourish the tip of the flap. There are several ways to modify this flap so that even moderate-sized defects can be repaired. The V-Y advancement flap is created by initially a V-shaped incision and advancing the triangular portion of the flap in a straight line toward its base. The wound is closed in the shape of a Y.

The factors that are often considered in flap are the location, size, and the depth of the defect, the anatomical structure and the local skin elasticity. There are 3 reasons to close the wound with a flap, which can facilitate the closure of defects that can not be done with a simple closure, so it can help to optimize the esthetic results, and to keep the function of the surrounding tissue.

Recurrences can occur due to one or several factors: the therapeutic modalities used, the nature of the tumor itself and the immune status of the patient. Recurrence rate of basal cell carcinoma with incomplete excision is about 12-41%. Basal cell carcinoma that have a high risk of recurrence that is has one or more of the following criteria: long duration of lesions, located in the middle of the face area, sized of >20 mm, a history of recurrences, history of radiation exposure, and an aggressive histopathologic characteristics. Nearly 50% recurrent tumors that have been eliminated still have the possibility of recurrence.
Basal cell carcinoma prognosis in most cases are good if treated properly. Although the primary tumor cure rate are quite high, but the patients should be monitored for recurrence or another primary basal cell carcinoma.\(^2\)

References