

Scalp SCC Pit Fall Oncology Surgery and Reconstruction Against Spread to The Lymph Node in The Neck: Case Report

I Nyoman Wawan Tirtayasa¹, Ida Bagus Putra Ambara^{2*},
Ida Bagus Made Suryawisesa¹, I Wayan Sudarsa¹

¹Oncology Division, Surgery Department Prof Dr I G N G Ngoerah Hospital
Faculty of Medicine Udayana University, Bali, Indonesia

²Surgery Resident, Surgery Department Prof Dr I G N G Ngoerah Hospital
Faculty of Medicine Udayana University, Bali, Indonesia

*Corresponding author details: Ida Bagus Putra Ambara; gusrama0912@yahoo.com

ABSTRACT

Background: The incidence of scalp tumors is increasing. Squamous cell carcinoma (SCC) of the scalp has a relatively poor prognosis due to its vertical growth limitation, high vascularity, ability to develop large-diameter lesions before invading critical structures, and close relation to the brain. Scalp reconstruction after tumor excision is possibly performed by various methods, such as skin graft. This study aims to report three cases of scalp SCC reconstruction, detailing the size of the defect and the type of flap utilized. **Case Presentation:** In this case series, patients presented with the same complaint of a lump on the back of the head. The lump felt enlarged, and in one case, felt pain and bleed easily. The biopsy was done, and it showed that the patient had squamous cell carcinoma. All of the patients underwent the surgery with a wide excision with a reconstructed flap was performed. No complaints were reported after the procedure. **Discussion:** Surgical therapy provides good survival rates in cases of scalp SCC. The first pitfall is failure to evaluate regional lymph nodes, which causes postoperative recurrence. In the pitfall procedure, it is difficult to evaluate the tumor node track through sentinel lymph node biopsy, which can detect the early spread of tumor cells to the lymph nodes even before they are detected clinically. **Conclusion:** Skin grafting is one method for reconstructing SCC on the scalp. Lymph nodes that are not evaluated during the surgical procedure can increase the risk of recurrence.

Keywords: Lymph node metastasis; scalp; skin graft; squamous cell carcinoma (SCC)

BACKGROUND

The incidence of squamous cell carcinoma (SSC) of the scalp is increasing, but only 1%-2% of cases are malignant.¹ SCC of the scalp has a poor prognosis due to vertical growth restriction, high vascularity, the ability to develop lesions with large diameters, and proximity to the brain. The scalp is a high-risk site associated with lymph node metastasis (80%).^{2,3} Although the five-year survival rate of patients with scalp SCC is 90%, most patients are elderly and have lymph node metastasis. The five-year survival rate becomes <40% for patients with lymph node metastasis.⁴ Risk factors for lymph node metastasis include tumor size, depth of invasion, degree of differentiation, presence of perineural growth, bone or vascular invasion, and tumors localized in certain face areas.⁵

SCC is commonly treated with surgical excision, Mohs surgery, or electrodesiccation and curettage. Non-surgical options include photodynamic therapy, topical or systemic chemotherapy, radiotherapy, and immunotherapy. Patients with advanced SCC are often considered ineligible for curative surgery and

radiation therapy. Still, they are limited to off-label systemic therapy of cisplatin-fluorouracil or cetuximab, which offer modest clinical benefit and high potential toxicity.⁶ The 5-year recurrence rate after standard excision is 8%, while in the Mohs micrographic surgery (MMS) procedure, it is 3%.⁷

There are several pitfalls in the reconstruction and surgery of the scalp SCC.⁸ For example, it is known that the standard for scalp SCC is clear margin excision. However, this is not always feasible due to anatomical restrictions, so preoperative imaging is required to determine the extent of invasion.⁹ Another pitfall is the MMS method. While this technique is quite effective for preserving skin in sensitive areas and treating complicated skin malignancies, it highly depends on the surgeon's skill. Other limitations include poor-quality frozen section tissue due to limited fixation time, the thickness of frozen section tissue (>3 mm may affect cell visualization), folds and holes in the tissue that affect the ability to determine positive margins, and the extent of the tumor.⁷

We report 3 cases of squamous cell carcinoma reconstruction on the scalp with different defect sizes, flap types, and pitfalls, which are likely to cause therapeutic failure and recurrence.

CASE PRESENTATION

There were 3 cases with head lumps diagnosed as SCC. The patients were 62 years old, 42 years old, and 45 years old. Two of the three patients were female. All patients underwent wide excision with flap reconstruction.

TABLE 1: Patient characteristics.

No	Sex	Age (year)	Diagnosis	Type of flap
1	Female	62 years	Scalp SCC scalp	Reconstruction with rotational flap
2	Male	42 years	Residive left occipital SCC	Reconstruction with rotational flap
3	Female	45 years	Recurrent left parietal SCC	Flap reconstruction

CASE 1

A 62-year-old female patient presented with a lump on the back of her head noticed six months ago. Initially, a wound appeared on the back of the head, then became a lump the size of a marble. The lump gradually enlarged to the size of a ping-pong ball. Pain in the lump (-), active bleeding from the lump (-). History of weight loss denied. Complaint of headache is denied. Complaints of nausea and vomiting are denied. Eating and drinking are good. The patient has a history of previous illnesses such as hypertension, controlled since six months ago, and type 2 diabetes mellitus since one month ago. The history of prior surgery was denied. The patient's medication history included amlodipine 1x10mg, candesartan 1x16mg, ezelin 1x12 units, and novorapid 3x4 units.

On physical examination, blood pressure was found to be: 120/70 mmHg, pulse: 76 x/min, respiratory rate: 18 x/min, temperature: 36.6 °C, oxygen saturation: 98%, Karnofsky score: 90. The eyes were not anemic, and the sclera was not icteric, there were no enlarged lymph nodes in the neck. Heartbeat S1-S2 regular, murmur (-), gallop (-). Pulmonary sounds are vesicular, without rhonchi and wheezing. Abdomen had no distension, with normal bowel sounds, appearing supple, tympanic, and without tenderness. Extremities were warm with CRT <2 seconds. Pre-occipital region examination revealed a well-defined mass, 5x3 cm in size, with a humped surface, active bleeding (-), pain (-), and mobile.

From the results of laboratory tests on January 12, 2024, WBC was obtained: $7.72 \times 10^3/\mu\text{L}$, absolute neutrophils (NE#): $4.67 \times 10^3/\mu\text{L}$, HB: 12.8 g/dL, PLT: $342 \times 10^3/\mu\text{L}$, APTT: 27.1 seconds, INR: 0.9, PPT: 13.8, SGOT: 28 U/L, SGPT: 17 U/L BS: 92 mg/dL, BUN: 16.7 mg/dL, Na: 143 mmol/L, K: 4.18 mmol/L. Chest X-ray examination was performed on November 30th, 2024 with a result of absent pulmonary abnormalities, cardiomegaly with atherosclerosis (ASHD), no metastatic process in the bones and pulmonary visualized thoracic spondylosis.

From the results of the history to the supporting examination, the patient was diagnosed with basal cell carcinoma of the scalp (BCC scalp), grade II hypertension, and type 2 diabetes mellitus. The patient underwent wide excision surgery with flap reconstruction on January 16th, 2024.

After surgery, the patient's consciousness seemed good, analgesic controlled surgical wound pain, and no other complaints. Physical examination showed blood pressure: 115/70 mmHg, pulse: 67x/min, respiratory rate: 18 x/min, temperature: 36.6 °C, Karnofsky score: 90. In the examination of the parieto-occipital region, there was a postoperative wound covered with sterile gauze, seepage (-), hematoma (-). A redon drain was installed with minimal production limited to 5 hours after surgery, with serohemorrhagic quality. Postoperative diagnosis of squamous cell carcinoma of the scalp (SCC scalp), with post-wide excision and reconstruction with rotational flap, grade II hypertension, and type 2 diabetes mellitus.

The management given after surgery was intravenous fluid as often as 20 drops per minute, wound care every two days, pain therapy in the form of fentanyl 300 mcg in 50 ml NaCl 0.9% at 2.1 cc per hour IV, paracetamol 500 mg every 6 hours orally.



FIGURE 1: Clinical appearance of head lumps.



FIGURE 2: Wide excision and reconstruction with rotational flap during surgery. There is an enlarged lymph node visible after locking (red circle).

On April 22nd, 2024, a post-op CT-scan examination was performed with a picture of heterogeneous solid mass in the soft tissue of the left occipital region, impressive soft tissue mass, multiple suspicious enlarged lymph nodes with partial central necrotic inside in the submental region, right left submandibular, right left upper-lower jugular, right left anterior-posterior cervical and right left supraclavicular, deviation of the septum nasi to the right, and cervical spondylosis.

Furthermore, the patient was followed up in the oncology surgery polyclinic of Prof. I.G.N.G Ngoerah Hospital. From the examination results, it appears that the surgical wound is closed and well-maintained. However, the enlarged lymph nodes were still visible.



FIGURE 3: Clinical features of post-action clinical follow-up.

CASE 2

A 42-year-old male patient complained of a lump on the back of the head since three years ago. Initially, the lump was not noticed, but it grew bigger. The patient had fallen one year ago and bumped the lump, causing an injury. When the wound appeared, the lump enlarged faster. Other complaints, such as fever, shortness of breath, and weight loss, were denied. The patient has had a history of high blood pressure since one week ago and asthma since two years ago. History of kidney disease, heart disease

and stroke were denied. History of smoking and drinking alcohol was denied. The patient had a history of surgery in the form of an excision biopsy at Jimbaran Hospital in September 2023.



FIGURE 4: Clinical features of head lumps before treatment.

From the physical examination, blood pressure was obtained: 110/70 mmHg, pulse: 89 x/min, respiratory rate: 16x/min, temperature: 36.8 °C, oxygen saturation: 98%. Eyes did not appear anemic, and the sclera were not icteric. Heartbeat S1-S2 regular, murmur (-), gallop (-). Pulmonary sounds were vesicular, without rhonchi and wheezing. Abdomen did not appear distended, with normal bowel sounds of 5-6 times per minute, appearing supple, tympanic and without tenderness. Extremities were warm with CRT <2 seconds. On examination of the occipital region, there was a 7x7cm lump with uneven surface, firm borders, flat edges, hyperemic (+), mobile (+), and tenderness (-).

Laboratory examination results on October 19, 2023 obtained WBC: 6.37 10³/μL, HB: 15 g/dL, PLT: 251 10³/μL, APTT: 37.1 seconds, INR: 1.05, PPT 14.8, AST: 21 U/L, ALT: 15 U/L, BUN: 7.2 mg/dL, creatinine: 0.89, e-LFG: 105, Na: 138 mmol/L, K: 4.29 mmol/L. On October 19th, 2023, a thoracic examination was performed with no abnormalities in the cardiac and lung and no metastases in the lung and bones were visualized. The patient underwent a head CT scan with contrast on October 26th, 2023. The CT scan showed a heterogeneous solid lesion with a cystic component and calcification inside with partially indistinct boundaries and irregular edges in the soft tissue of the left occipitalis region partially attached to the scalp in that region, suggesting malignant mass, multiple suspicious enlarged lymph nodes at the right level Ia/b, and left IIa, right chronic mastoiditis, hypertrophy of the right inferior nasal concha, bilateral frontal sinus agenesis. A biopsy examination at Bali Jimbaran on October 16th, 2023, showed a picture of squamous cell carcinoma, poorly differentiated at the occipital edge region, and the base of surgery has not been free of the tumor mass.

Based on the history and supporting examination results, the patient's diagnosis is recurrent occipital

SCC, with a post-excision biopsy on October 16, 2023. Furthermore, the patient underwent operative action, namely wide excision with flap reconstruction. Another therapy given was NaCl 0.9% intravenous fluid, 20 drops per minute.

After the procedure, the patient was well-conscious; the surgical wound pain was minimal and controlled by analgesics. Post op physical examination obtained blood pressure: 110/70 mmHg, pulse: 86 x/min, respiratory rate: 18x/min, temperature: 36.8 °C, oxygen saturation: 98%. In the physical examination of the occipital region sinistra, there was a post-wide excision wound covered with gauze, a drain glove was attached, a viable flap appeared that was the same color as the surrounding tissue, palpably warm, and there was no seepage. Post-operative wound covered with gauze, minimal seepage, with skin graft. In the left femoral region, a donor post-operative wound was covered with gauze and elastic bandage; no seepage was seen in the donor region.

After surgery, the patient's diagnosis became recurrent left occipital SCC with post-wide excision and reconstruction with H-0 rotational flap, as well as a history of post-excision biopsy of occipital SCC on October 16th, 2023. The therapy and post-op work plan given was acetate Ringer's intravenous fluid, 20 drops per minute, ceftriaxone 1gr every 12 hours, glove drain was released 24 hours post-operative, occipital region flap wound care every two days / saturated gauze, flap evaluation every day, evaluation of STSG occipital region sinistra H5 post-operative (11/18/23), and evaluation of donor skin graft sinistra femur region H14 post-operative (11/27/23). In pain management, the patient was given fentanyl 300 mcg with ketamine 20 mg in 50 ml NaCl 0.9% at a rate of 2.1 ml/hour, paracetamol 500 mg every 6 hours orally and ibuprofen 400 mg every 8 hours orally.



FIGURE 5: Wide excision process with rotational flap reconstruction.

CASE 3

A 45-year-old woman presented with complaints of a lump on her head since ten years ago; the lump was initially realized as a marble, then enlarged to the size of a coin plate. Other complaints include pain in the lump. The lump was accompanied by sores and bled easily. The lump was also complained of intermittent pain. The patient had biopsy surgery one year ago. Currently the patient came for surgery to remove the lump on the head. There was no history of previous diabetes, asthma, heart disease, or other systemic diseases. The patient has a history of surgery in the form of a post-excision biopsy in January 2021 in Karangasem.

Based on the physical examination obtained, blood pressure: 120/70 mmHg, pulse: 86 x/min, respiratory rate: 18x/min, temperature: 36.8 °C, oxygen saturation: 98%, and Karnofsky score: 90. The eyes were not anemic, and the sclera were not icteric; there were no enlarged lymph nodes in the neck. Heartbeat S1-S2 regular, murmur (-), gallop (-). Pulmonary sounds were vesicular, without rhonchi and wheezing. Abdomen had no distension, with normal bowel sounds, appearing supple, tympanic and without tenderness. Extremities were warm with CRT <2 seconds. Based on the physical examination of the parietal region sinistra, there was a mass with a different color from the surrounding skin. There was a lump measuring 5x6cm, humped, bleeding easily, and an ulcer.

In the supporting examination in the form of laboratory tests on December 19th, 2023, the WBC level was obtained: 9.70 10³/μL, Hb: 13.50 g/dL, HCT: 42.10, PLT: 379.00 10³/μL, PPT: 10.3, INR: 0.89, APTT: 26.9 sec, SGOT: 24.00 U/L, SGPT: 17.00 U/L, albumin: 4.30, BUN 9.1 mg/dL, creatinine: 0.79, e-LFG: 90.40, sodium: 142 mmol/L, potassium: 3.94 mmol/L. On thoracic examination on December 19th, 2023, there were no abnormalities in the cardiac and lung. Currently, there is no metastatic process in the pulmonary and visualized bone. A 128-slice head CT scan with contrast on May 15th, 2023, revealed a heterogeneous density mass in the soft tissue of the left parietal region that appeared to cause erosion of a portion of the left parietal bone, suggesting malignant soft tissue mass. There was no intracranial extension of the mass, right maxillary sinusitis, left maxillary sinus cyst retention, or right deviation of the nasal septum. The patient has also undergone a histopathology examination at Karangasem Hospital in January 2021 with the result of clear cell squamous cell carcinoma.

Based on the results of the history and supporting examination, it can be concluded that the patient's diagnosis is recurrent SCC sinistra parietal region (History of biopsy excision at Karangasem Hospital January 2021). Furthermore, the patient underwent surgery in the form of wide excision with reconstruction. The surgery was performed on December 29th, 2023.



FIGURE 6: Wide excision process with reconstruction flap.

After the operative procedure, the patient was well-conscious, and analgesics-controlled pain at the post-operative site. Post-operative physical examination obtained blood pressure: 110/70 mmHg, pulse: 70 x/m, respiratory rate: 17 x/m, and temperature: 36.2 OC, with oxygen saturation: 99 %. The physical examination of the parietal region sinistra showed a post-operative wound at the parietal location with the head covered with sterile gauze; there was no seepage in the surgical area.

After surgery, the patient's diagnosis became recurrent left parietal SCC, post-wide excision with day 0 reconstruction. Management and planning were given post-action in the form of NaCl intravenous fluid, 20 drops per minute, glove drain released on December 30th, 2023, do wound care if there is seepage. Analgesic therapy given was morphine 20 mg in 20 mL NaCl 0.9% at a rate of 0.6 mL/hour, ibuprofen 400 mg every 8 hours orally, and paracetamol 500 mg every 6 hours orally.

DISCUSSION

Squamous cell carcinoma (SCC) is a malignant tumor originating from epidermal keratinocytes or hair follicles that are generally locally invasive and has a high risk of metastasis. SCC is the second most prevalent type of skin cancer and has the second highest mortality rate after melanoma. The etiology of SCC is multifactorial but often associated with ultraviolet light exposure and immunodeficiency conditions. Based on demographics, SCC is more common in the elderly, with a male-to-female ratio of 2:1.¹⁰⁻¹²

Primary lesions of SCC are most commonly found in the head and neck region, approximately 35%-70%. This condition is associated with a higher risk of recurrence or metastasis than primary lesions in other regions. Despite covering only 5% of the body surface area, the incidence of SCC in the scalp region accounts for 3%-20% of all SCC cases. Scalp SCC is more common in males and the elderly population. This condition is associated with long-term exposure to sunlight and the protective function of hair as a barrier, which is reduced due to baldness in men.

Several previous studies have shown that SCC in the scalp region is one of the factors of poor prognosis due to the risk of local recurrence of 6-10% and the risk of lymph node metastases of 7%-9%.^{10,12-15}

Invasive scalp SCC lesions have different clinical features depending on tumor size, differentiation, and skin type. Still, tumor lesions will generally appear as pink hyperkeratotic plaques, with or without a central horn plug that can ulcerate or crust or be chronic non-healing ulcers. Histopathologic examination, as the gold standard of diagnosis, generally finds atypical epithelial cell proliferation along the epidermis towards the lower dermis or may invade surrounding structures such as fascia, subcutaneous fat, and muscle.^{11,16,17}

Surgical therapy is the main option in scalp SCC cases, with a 5-year disease-free survival rate of >91%. Surgical options include wide local excision or Mohs micrographic surgery (MMS). Generally, low-risk scalp SCC primary lesions can be conventionally excised, but MMS is preferred in high-risk cases. However, complications such as local invasion, loco-regional recurrence, lymph node metastasis, and even distant metastasis can be found in some cases. Some pitfalls in this case series include failure to evaluate occipital nodes, inadequate flaps, and difficulty determining the tumor track that causes recurrence.^{18,19}

The first pitfall in these cases is the failure to evaluate the lymph nodes, especially occipital ones. In the first case, it was described that the pre-operative physical examination had found enlargement of the occipital lymph node. However, in the first case, no lymph node resection was performed, eventually leading to a recurrence in the patient shortly after surgery.

This condition needs to be a concern because when dealing with scalp SCC cases, a thorough physical examination is a must to detect early risk factors for postoperative complications such as tumor diameter >2 cm, tumor infiltration or adhesion to the underlying structure, neurological symptoms, and systemic lymph node examination. Particular emphasis is placed on regional lymph node examination of the occipital, parotid and cervical areas to exclude metastasis to the regional lymph nodes. Palpable regional lymph nodes or abnormal lymph nodes from imaging should be followed up with fine-needle aspiration biopsy (FNAB) or core biopsy.^{10,20,21}

The standard treatment for patients with regional lymph node palpation from physical examination and imaging is lymph node dissection. In cases of parotid lymph node involvement, superficial parotidectomy and ipsilateral cervical dissection are recommended. This is because several previous studies have shown that parotid gland involvement is positively correlated with a high incidence of occult metastasis in the neck lymph nodes.

However, the decision should be based on the aggressiveness of the tumor, the physical status of the patient, and the surgical conditions. If there is an extracapsular extension, involvement of more than two lymph nodes, or one of the lymph nodes is more than 3 cm in diameter, adjuvant radiotherapy after lymph node dissection is recommended. If the patient with lymph node metastasis has been excised but incomplete or is inoperable, systemic therapy and/or radiotherapy should be considered.^{10,22,23}

In these cases, some patients use skin graft or flap options to close the postoperative defect. Flap selection in scalp SCC cases is one of the things to consider. This is because inadequate flaps with narrow tumor-free margins and lack of radicality increase the risk of recurrence as found in this case.

The choice of reconstructive approach in scalp SCC is reconstructive techniques that do not rotate the surrounding tissue structure and or do not change the anatomy of the surgical bed, where residual tumor cells may remain. Primary closure with linear repair, skin grafting (split-thickness or full thickness), dermal matrices, and secondary healing with granulation tissue are some of the options that can be used, especially if MMS surgical techniques are unavailable. Important considerations need to be made in cases of skin grafting when the periosteum has been removed leaving exposed bone or if the patient has had previous radiotherapy sessions.^{10,24}

Partial-thickness defects without periosteum involvement can generally be primarily closed with a maximum diameter of 3 cm. This can provide good aesthetic results, and can preserve scalp tissue containing hair follicle cells. However, this technique is limited by the low elasticity and flexibility of the scalp tissue. Applying too much tension also risks causing wound dehiscence and disrupting hair growth. Skin grafting is the preferred option for medium-large-sized defects up to 10 cm. This is because it is a quick and easy procedure with no morbidity to the donor site. The tissue bed to be grafted must provide adequate blood vessels, which an intact periosteum can provide. Therefore, in cases of non-intact periosteum after tumor resection, other reconstructive techniques are recommended. In patients who plan to undergo postoperative adjuvant therapy, combining dermal substitutes followed by a skin graft is advisable rather than using a skin graft alone. This is because skin grafts generally cause unstable scars, which are not recommended in patients who will undergo radiotherapy.^{10,24}

In cases with aesthetic considerations, skin graft is not the main choice. This is because skin grafts are not similar in structure, color, and thickness to the scalp. Therefore, skin graft is generally preferred in male patients with advanced age or who have experienced baldness. Meanwhile, in cases with aesthetic considerations, it is more recommended to use local flaps from tissues around the scalp with color, structure and tissue quality characteristics that are more similar to the scalp. Therefore, local

flaps are more recommended in patients of young age and female gender. However, the use of local flaps is often limited due to the high-risk clinical features of the tumor and unclear histopathological confirmation. This leads to cases where the tumor margin is still unclear; reconstruction techniques with skin grafts are preferred as they provide better recurrence control.^{10,24}

In this case, it is also difficult to determine the tumor node track. This makes it difficult for the operator to determine the tumor margin and spread to the sentinel lymph node. In patients without evidence of spread to regional lymph nodes, there is no evidence to support the effectiveness of lymphadenectomy, so it is not recommended. One recommended treatment for these patients is sentinel lymph node biopsy (SLNB). SLNB has been used in various skin cancers as a method of early detection of lymph node metastasis before it is clinically detectable.^{10,25,26}

Some previous studies have shown that in 8%-12.3% there has been tumor cell involvement or spread to the sentinel lymph node even before it is clinically detected. The risk of sentinel lymph node involvement increases as the tumor stage increases. Therefore, some risk factors for positive SLNB findings include tumor diameter, thickness, perineural invasion, and lympho-vascular invasion (LVI). Based on previous studies, the false negative rate of SLNB in SCC is 3.9%-4.6%. However, until now, the role of SLNB in scalp SCC, especially those that are high risk, is still under debate. Until now, no clinical trials have tested its effectiveness, only limited to several systematic review studies.^{10,25,26}

SLNB procedures are generally performed by injecting blue dye, usually isosulfan blue, patent blue, or methylene blue, which is then captured through radiotracer imaging. However, the success of SLNB procedures in head and neck malignancies, including scalp SCC, is highly dependent on operator experience. Operators with high experience generally have a better success rate in identifying, localizing, and excising sentinel nodes than those with no experience.^{25,27}

This is due to the complexity of the head and neck's lymphatic and anatomical structures, including seven levels of nodal basins in the neck, each with its own anatomical landmarks. The oral cavity drains lymph nodes to levels I-III, the larynx and hypopharynx drain lymph nodes to levels II-IV, and the posterior scalp and suboccipital drain lymph nodes to levels II-V. All structures in the head and neck are also very close to each other, so the presence of tumors in this area can make the localization of lymph nodes very difficult.²⁵⁻²⁷

Furthermore, in addition to considering the three pitfalls described above, scalp SCC cases also need to consider malignant risk stratification based on the clinicopathological characteristics of each tumor. Scalp SCC cases with primary tumors >2 cm in diameter, perineural invasion (PNI) >0.1 mm, high histological grade, or lympho-vascular invasion (LVI)

are some of the characteristics of tumors with a risk of complications and poor prognosis. In addition, patients with immunodepression conditions, such as patients with HIV infection, history of organ transplantation, stem cell transplantation, or chronic leukemia also show a higher risk of loco-regional recurrence, including metastasis. Patients with these conditions generally require multimodal therapy, namely a combination of surgery, radiotherapy, chemotherapy and immunotherapy.^{11,16,21}

CONCLUSION

Scalp SCC with different defect sizes, flap types and pitfalls can potentially cause therapy failure or recurrence. The skin graft is one of the reconstruction methods of scalp SCC. Lymph nodes not evaluated during surgery can increase the risk of recurrence.

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