

Supraclavicular Fasciocutaneous Flap: Best Regional Flap for Reconstruction of Soft Tissues in the Lateral Neck and Face

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ABSTRACT

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INTRODUCTION

Supraclavicular flap (SCF) which is pedicled on the suprascapular artery and veins which was first described by Limberly in 1979 and popularized by Pallua and Machens in the 1990s (Eid, 2019). This is a fasciocutaneous flap which has gained prominence for the reconstruction of oral, neck, pharynx and relieve of burns contracture. The advantages include good colour match, surgical ease. limitations of SCF includes its limited use above the root of the helix, in neck dissections where Transverse Cervical Artery (TCA) is transected and when bulk tissue is needed (Sandu et al., 2012). This study recounts our experiences with two cases of SCF

METHODS

From the records of the Department of Oral and Maxillofacial Surgery, University of Benin Teaching between December 2010 and August 2023, supraclavicular flap was used in 2 cases. The details of patients are presented in Table 1 and Figure 1. Surgical anatomy/ Technique of flap harvest
The supraclavicular flap is a pedicled on the supraclavicular artery which is a branch of the transverse cervical artery (SCA). The SCA can be identified within the triangle bounded by external

jugular vein posterolaterally, the posterior border of sternocleidomastoid (SCM) anteromedially, and the clavicle inferiorly. Two vena comitantes accompany the artery and nerve supply is from C3 and C4 of the cervical plexus.

Patient is placed supine on the table with the head turned to the opposite side. With the aid of a handheld Doppler the artery is identified and skin markings made. The artery is traced distally over the clavicle and deltoid and mapped. Based on the cranial extent of the defects, the flap is measured but not beyond the insertion of the deltoid muscle. A fusiform shaped flap is raised in the subfascial plane starting from the distal extent proximally towards the pivot of the flap at the marked triangle. The flap is inserted into the defects either by tunneling the flap through the subdermal tunnel to the face or incorporated into the neck or folded when a through-and-through defect is encountered.

RESULTS

Table 1. Shows the general characteristics of each patient. Patients are being followed up. Case 2 is currently on Imatinib (Glivec). Shoulder function in both patients was satisfactory. No physiotherapy was employed.

Characteristics	Case 1	Case 2
Age (years)	59	38
Sex	Female	Female
Ethnicity	Urhobo	Urhobo
Occupation	Fish trader	Trader
Diagnosis	Metastatic carcinoma ex-pleomorphic adenoma of the right parotid gland	Dermatofibrosarcoma protruberance
Location of the lesion	Fungating right pre-auricular swelling infiltrating overlying skin	Left cheek infiltrating the oral mucosa and skin
Procedure	parotidectomy, ipsilateral Supraomohyoid neck dissection	Wide excision
Dimension of the recipient defect	14cm by 14 cm	7cm by 10cm
Size and length of the SCF flap	7cm by 15cm	9cm by 17cm
Use of flap	Cover defect at preauricular area and neck	Folded for inner lining of the cheek, tubed and transected 6weeks later
Donor site morbidity	Primary closure	Primary closure and skin graft
Complication	Peripheral tissue necrosis Chyle leakage	Peripheral tissue necrosis Fistula formation

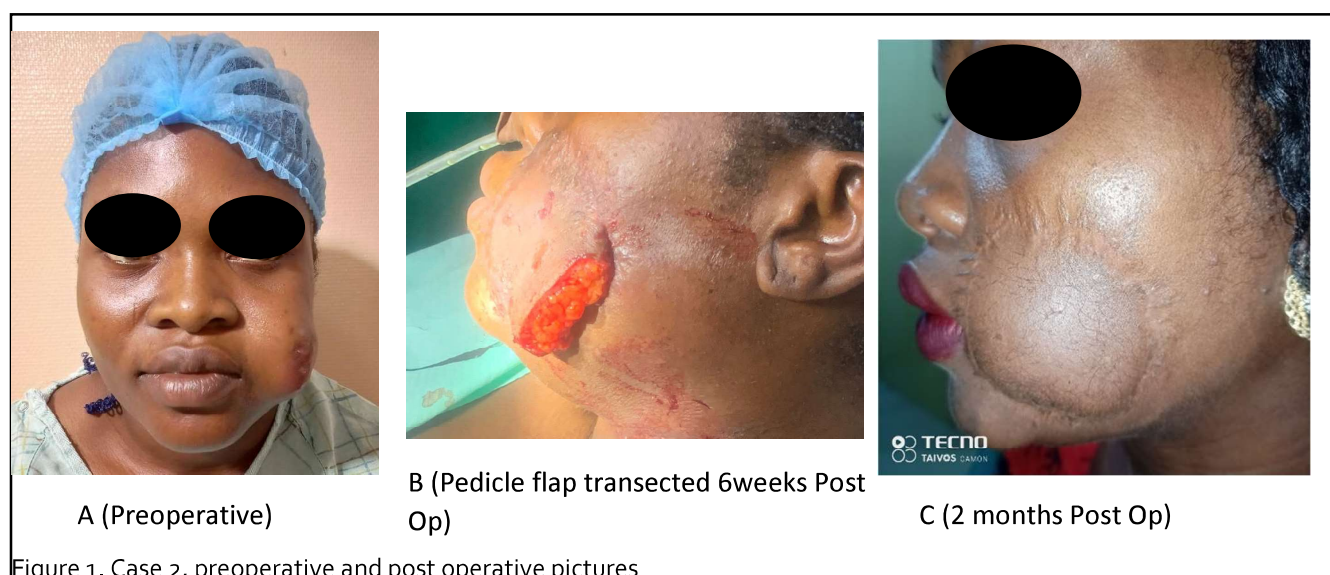


Figure 1. Case 2, preoperative and post operative pictures

CONCLUSION

SCF is versatile for the reconstruction of oncological defects of the lateral face to the level of the preauricular region with minimal complications. It is a flap that should be in the armamentarium of every reconstructive surgeon. In our setting, where free flap procedures are not done, the SCF is a handy tool.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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