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Nyairo M.D, **Kerubo L.J**, **Nyabuto C**, **Ogechi J**, **Kiriga M**, **Aswani J**, **Vilembwa A** and **Nangole F.W,** Department of Surgery, University of Nairobi, P.O. Bpx 30197-00100, Nairobi, Kenya.

Corresponding Author: Dr. D. Nyairo, Department of Surgery, University of Nairobi, P.O. Box 30197-00100, Nairobi, Kenya.

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M. D. NYAIRO, L. J. KERUBO, C. NYABUTO, J. OGECHI, M. KIRIGA, J. ASWANI, A. VILEMBWA and F. W. NANGOLE

SUMMARY

Radical tumor ablations in the head and neck area require intricate reconstructive procedures.

This is even more so in the setting of HIV where more advanced disease is observed at presentation resulting in poorer outcomes and increased complications. Free tissue transfer has enabled preservation of function and aesthetics while upholding oncologic surgery principles. The anterolateral thigh (ALT) flap is a very reliable workhorse flap in this regard.

We present a case of a 51-year-old HIV positive male with oral squamous cell carcinoma that was resected and the resultant defect reconstructed with a free, sensate, chimeric anterolateral thigh (ALT) flap. The patient was followed up closely. Initial intensive free flap monitoring and subsequent routine clinical reviews were undertaken. Six-week postoperative review revealed a healthy well incorporated flap that successfully resurfaced both intraoral and cutaneous defects.

A chimeric ALT flap is an excellent choice to resurface both the intraoral and cutaneous defects.

The lateral femoral cutaneous nerve of the thigh can be used to restore sensation in complex through and through cheek defects after oncologic surgery.

Key words: **Chimeric, sensate flap, HIV positive, Head and neck reconstruction**

INTRODUCTION

Head and neck cancer incidence is ranked third of all malignancies in developing nations (1) with oral squamous cell carcinoma being the highest at 40.6% (2,3).

HIV infection is associated with increased incidence, advanced disease and poorer outcomes of these malignancies which necessitates larger, more complex flap designs to achieve cover (4–11).

Chimeric ALT flaps are ideal for defects demanding reconstruction in greater than two dimensions. The lateral femoral cutaneous nerve of the thigh can be utilized for sensory restoration at the recipient site. We present a case of a HIV positive 51-year-old man in whom a sensate chimeric ALT flap was used to resurface a complex face defect after excision of advanced oral squamous cell carcinoma.

Case presentation

51-year-old HIV positive male on HAART for 14 years presented with an exophytic ulcerated oral squamous cell carcinoma involving right cheek and mandible.

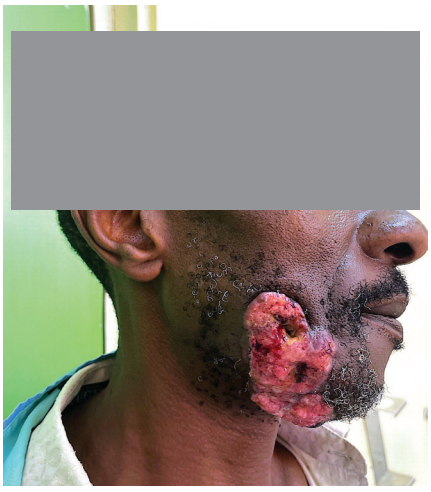

Figure 1: *Preoperative view of the mass.*

The surgery involved right sub-mandibulectomy done at para symphysis level, disarticulation on the right and bilateral lymph node dissection.

The resultant cutaneous defect was approximately 16cm by 12cm and an intraoral defect of 8cm by 4cm.

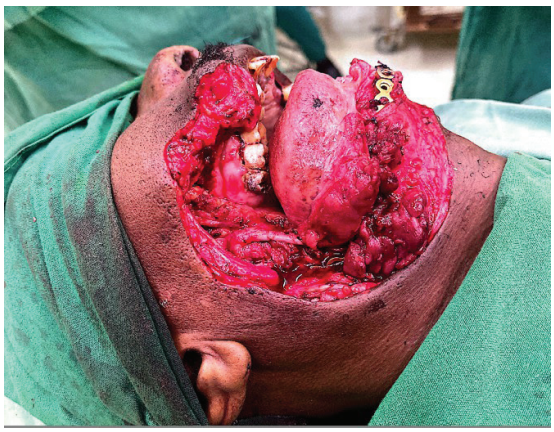

Figure 2: *Resultant through and through cheek defect*

Fasciocutaneous ALT flap was raised with two musculocutaneous perforators then divided to match the defects, each segment with its own perforator.

Figure 3: *(Left to right) the lateral femoral cutaneous nerve of the thigh, ALT flap being retracted, proximal perforator, distal perforator*

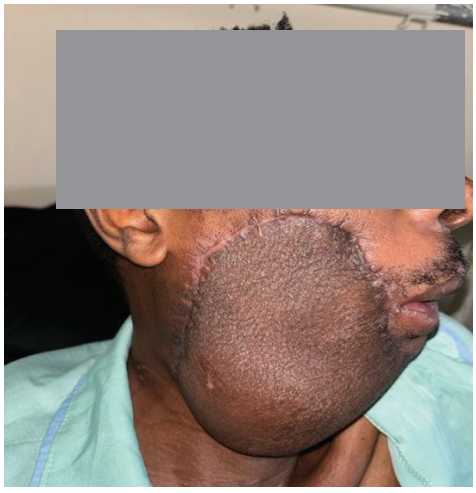

Figure 4: *Patient approximately 6 weeks post-operatively*

DISCUSSION

Since its description by Song et al in 1984 (12), various authors have published on the versatility, vascular anatomic variations, surgical modifications and applications of the ALT flap in head and neck reconstruction (13–17).

ALT flap has good pliability and may be folded for the reconstruction of both the inner and outer lining of through and through cheek defects. The vascular pattern also allows the use of a more versatile design with double skin paddles based on multiple perforators (13,16). It may be raised with vastus lateralis muscle as a myocutaneous flap or combined with adjacent flaps according to the chimeric flap principle, to reconstruct large or complex 3-dimensional defects (17–19).

There is a dearth of knowledge on free flap surgery in patients living with HIV. Studies have reported higher surgical complication rates and flap loss in these patients implicating low CD4 counts, vasculitis, and sepsis as contributing factors (11,20,21). Few studies have demonstrated comparable complication rates between patients with and without HIV (20).

This case report shows that successful complex free flap reconstruction can be undertaken in the setting of HIV with proper patient selection.

CONCLUSION

The ALT flap is highly versatile and offers flexibility in resurfacing complex defects of the head and neck region. It can be raised with the lateral femoral cutaneous nerve of the thigh to restore protective sensation after oncologic tumor resection. Patients living with HIV can have successful microsurgical reconstruction with optimal patient selection and preparation.

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