

Introduction

Oro-facial defects require reconstruction that provides suitable colour match and texture. Moreover, inner and outer cheek lining and bulk are key considerations. In cases of severe oro-facial infections concomitant mandibular and maxillary abnormality, for example trismus and osteomyelitis, can mandate the need for tissue to obturate resultant defects. We assessed the use of the extended sub-mental flap (ESM) in non-oncological patients with such defects.

Methods

Twelve patients were prospectively identified and included in this case series. All patients were survivors of Cancrum Oris (NOMA). Demographic details, nutritional status and co-morbidities were recorded. Defects were classified according to the tissues destroyed; cheek, mandible, oral cavity, lip(s), nose and eye(s). Simultaneous procedures carried out were recorded. The surgical anatomy of the ESM versus the traditional Sub-mental flap were scrutinised using cadaveric examples for the purpose of this presentation.

Results

All patients had composite defects of the cheek and oral cavity plus at least one other local anatomical structure. Age range was 10-41 years and mean Body Mass Index (BMI) was 18. Concomitant trismus release was performed in 7/12 patients. Only 1 patient, who had a scarred flap harvest site required a return to theatre for flap tip debridement, and 1 patient required antibiotics for superficial wound infection.

Conclusion

The ESM is a robust flap with minimal incidence of major complications. We believe the extended flap provides a safer method of Sub-Mental flap harvest to protect the pedicle whilst maximising flap bulk to obturate these complex defects. The ESM negates the need for microsurgical tissue transfer in a group of patients with poor nutritional status and in an environment not necessarily conducive to free flap monitoring. Future applications of the ESM could include salvage for orofacial oncological defects.

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