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Recurrence of intraoral squamous cell carcinoma at the base of nasolabial flaps used for intraoral reconstruction: a report of two cases

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SUMMARY. **The nasolabial flap has proved useful in facial and intraoral reconstruction. Two cases are presented where nasolabial flaps used for intraoral reconstruction were associated with tumour recurrence in the base of the nasolabial flap.**

Case report

Case 1

A 67-year-old man presented with a T2 NO SCC of the floor of the mouth. He underwent excision of the floor of mouth and bilateral submandibular gland clearance. The defect was closed using bilateral inferiorly based nasolabial flaps which were divided and inset at 3 weeks. Histology reported complete excision of a well differentiated squamous cell carcinoma. All margins were reported free of tumour and the lymph nodes showed reactive changes only. Surgery was followed by a course of radical radiotherapy to the floor of mouth and anterior triangles of the neck (60 cGy in 30 fractions). The patient attended for regular follow-up and at 9 months a firm mass was discovered in the left cheek, at the site of origin of the nasolabial flap (Fig. 1). The lesion was thought to be an inclusion cyst and was excised under general anaesthesia. Histology however showed islands of squamous cell carcinoma similar to the original specimen. The patient therefore underwent wide, full thickness excision of the left cheek, which again confirmed the presence of squamous cell carcinoma. All margins were reported free from tumour and the patient remained disease free until his death 3 years later from a myocardial infarct.

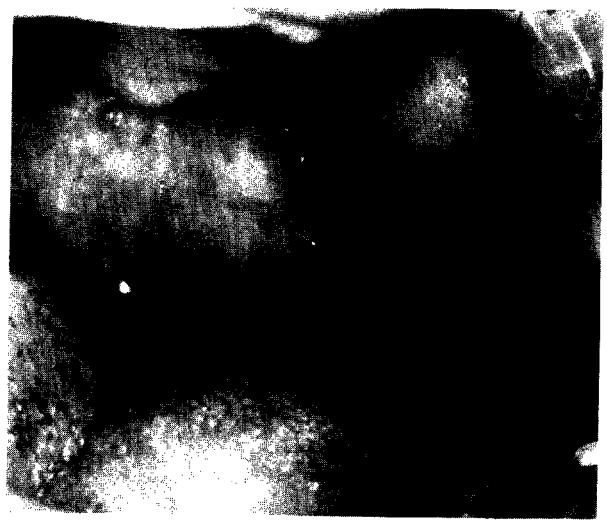

Fig. 1

Figure 1—Intraoral view of swelling in cheek at the site of raising the original nasolabial flap.

Case 2

A 54-year-old woman presented with a T2 N0 squamous cell carcinoma of the left posterior alveolus. She underwent excision of the lesion with a rim mandibulectomy and the defect was repaired with an islanded single stage inferiorly based nasolabial flap. Histology of the specimen showed a completely excised squamous cell carcinoma without bone invasion. 3 months later she developed a left submandibular swelling and underwent a left neck dissection which showed evidence of lymph node metastases. The patient therefore commenced a course of radiotherapy but 2 weeks after starting radiotherapy she was found to have a swelling in the left cheek at the base of the nasolabial flap. Fine needle aspiration biopsy of the lesion showed squamous cell carcinoma. The radiotherapy fields were therefore extended to include the left cheek and after completing radiotherapy to a dose of 60 cGy the area was widely excised and the defect repaired using a deltopectoral flap. The patient remains disease free 2 years after her primary resection.

Discussion

Nasolabial flaps have proved a popular method of intraoral reconstruction following tumour excision, particularly in the anterior floor of mouth and buccal mucosal regions (Elliot, 1976; McGregor and McGregor, 1986, Mutimer and Poole, 1987). Despite the popularity of this flap and other pedicle flap reconstructions, tumour recurrence in the base or bridge segments of such flaps appears to be exceedingly rare. We can find only two reports of similar cases: one in a deltopectoral flap (Mahaffey and Sommerlad, 1985) and one in a temporalis muscle flap (Carr and Gilbert, 1986). The aetiology of such spread is unclear. Mahaffey and Sommerlad (1985) postulated tumour spread via the ingrowth of microlymphatic circulation along the pedicle of the deltopectoral flap to its base. Carr and Gilbert (1986) explored the idea of iatrogenic contamination of the donor site at the time of operation leading to tumour seeding. Although tumour seeding is a well known entity in certain

pathological conditions, notably pleomorphic salivary tumours, it is not a recognised entity in intraoral squamous cell carcinoma. Since both our recurrences occurred in the subcutaneous tissue of the cheek without any evidence of intraoral or mucosal disease, it would seem more likely that the spread of tumour occurred along a lymphatic circulation which was introduced by the pedicle flap. This, in part, may also explain why the single stage technique developed evidence of recurrence at 3 months, whereas the two stage technique, in which the pedicle was divided, did not show recurrence until 9 months. Unusual cases like the two reported here challenge our commonly accepted views on the spread of malignant tumours. As in all forms of surgery strict attention has to be paid to excision margins, the lymphatic drainage of the area affected and meticulous surgical technique. Despite these precautions tumour may appear at unexpected sites which are difficult to explain. It is hoped that these case presentations will stimulate other authors to notify the Journal of similar cases and perhaps a pattern will emerge that will help explain the appearance of tumour at the base of a pedicle flap reconstruction.

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