

PRIMARY EXCISION AND IMMEDIATE RECONSTRUCTION FOR ADVANCED CANCER OF THE CHEEK

M. N. SUDHAKAR KRISHNAN
N. JANAKARAJAH

SUMMARY

Carcinoma of the buccal mucosa is the commonest intra-oral malignancy seen in Malaysia. The purpose of this paper is to present 12 patients with carcinoma of the buccal mucosa who were seen by the authors between January 1981 to September 1981. The principal problems are those of late presentation and treatment, these aspects are illustrated, with a view of early return to normal life.

INTRODUCTION

India, Sri Lanka and South East Asia have the highest incidence of oral cancers. This is attributed to the habit of chewing of betel, peculiar to this region. The betel leaf is smeared with slaked lime and chewed together with tobacco and areca nut. (Fig. 1). This mixture is usually kept for prolonged periods between the cheek and alveolus or the lip and alveolus. This habit compounded with

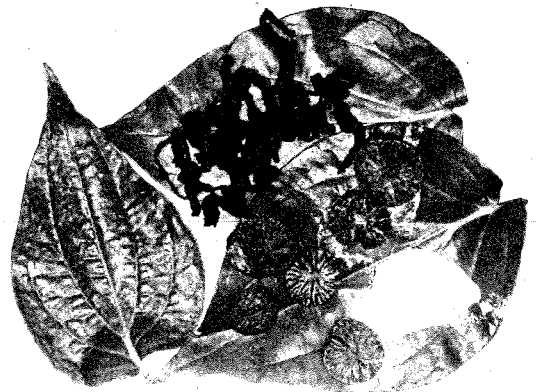


Fig. 1 Constituents of the betel quid: - betel leaf, tobacco, slaked lime and areca nut.

alcoholism, avitaminosis and sepsis strongly predispose to cancer of the oral cavity. Carcinoma of the cheek mucosa is the predominant lesion of the oral cavity in Malaysians,¹ and also in our series at the University Hospital, Kuala Lumpur, (Fig. 2), whereas carcinoma of the tongue and floor of the mouth are common in South Africa² and U.K.³ Among Malaysians the peak age incidence is between 51-70 years, while the male: female ratio for the Indians and Malays is 1:1.1, and for Chinese 3.5:1.¹ Most carcinomas of the cheek are detected late. By the time discomfort and pain attract attention the lesion has usually spread to the full thickness of the cheek. (Fig. 3).

M. N. Sudhakar Krishnan, B.Sc, M.B.B.S, M.S., FRCS
(Glasgow & Edin.)
Dept. of Surgery,
University Hospital,
Kuala Lumpur.

N. Janakarajah, B.D.S. (Ceylon.) FDS.RCS (Edin).
Dept of Oral Surgery,
Dental Faculty,
University Malaya,
Kuala Lumpur.

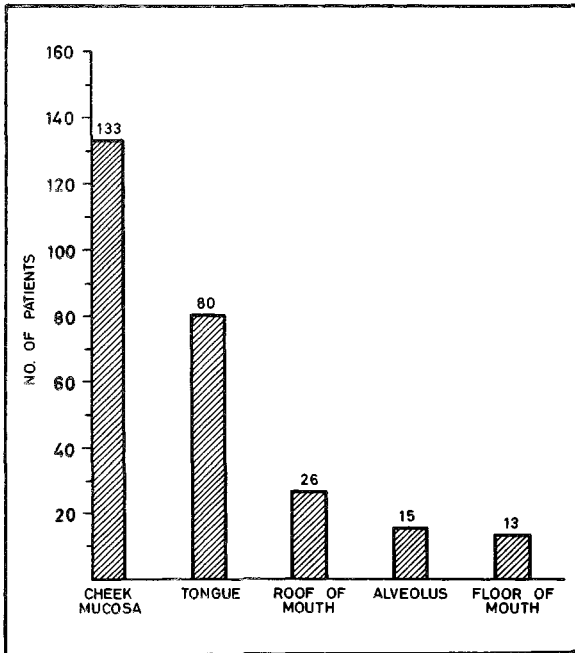


Fig. 2 Number of patients and sites of malignant oral lesions seen at University Hospital, Kuala Lumpur, 1968 - 1979.

MATERIALS AND METHOD

Between January 1981 to September 1981, 12 patients of carcinoma of the cheek mucosa were seen. This paper deals with the management of 10 of them, with wide excision of the lesion and immediate reconstruction of the defect.

Two patients, unsuitable for surgery, were given radiotherapy. Of the 12, 5 were males and 7 females; while the racial distribution was 9 Indians and 3 Malays. The age ranged between 48-82 years. The duration of symptoms ranged from 3 to 26 months. Four patients were referred following poor response to radiotherapy, of these 3 had oro-cutaneous-fistulae. Four of the patients were smokers. Two consumed alcohol regularly and 7 were habitual betel chewers. Of the latter, 4 normally included tobacco in their betel amalgam. In 5 patients, the submandibular lymph nodes felt hard and mobile. The patients were staged on the T.N.M. classification based on the UICC 1978 categories (Table I).

After improving the oral hygiene, ten patients underwent wide excision of the primary lesion. Eight patients underwent frozen section examination of the surgical margins to ascertain adequate clearance of the tumour. One patient had



Fig. 3 Case No. 3 — Showing the oro-cutaneous fistula due to extensive carcinoma of the cheek.

an extended hemimandibulectomy, 3 had segmental mandibulectomy and 6 had concurrent suprahyoid block dissections. (Table I).

RECONSTRUCTION

Following surgical excision of the primary lesion in the cheek, reconstruction involved 2 areas: the inner lining and external covering (Table I). The main problem was the difficulty of providing an adequate epithelial cover for the buccal aspect. For the inner lining, tongue flaps were used in 5 cases supplemented by a split skin graft in 3, and palatal flaps in 2. Reversed forehead flaps were used in 2 patients for the inner lining. In 3, the buccal mucosa was approximated by primary closure.

The external surface of the cheek defect was reconstructed by raising a forehead flap in 5 patients. Reversed forehead flaps were used in 2. The external surface of the latter two were covered with a split skin graft in one, and a pectoral myocutaneous flap in the other.

Following surgery, the vital signs of the 8 patients

TABLE I
RECONSTRUCTION FOLLOWING EXCISION OF CARCINOMA CHEEK

Patients	Tumour stage on TNM classification (UICC - 1978)	External Covering	Assoc. Surgical Procedures	Inner Lining
No. 1 M. - Male DXRT	T ₃ N ₀ M ₀	F.P	Seg. Mandibulectomy	T.F. + S.S.G.
No. 2 Y. - Male	T ₃ N _{1b} M ₀	F.P.	S.HY.B.DIS.	T.F. + S.S.G.
No. 3 I. - Male DXRT	T ₂ N ₀ M ₀	F.P		T.F. + S.S.G.
No. 4 G.H. - Male	T ₄ N _{1b} M ₀	F.P.	Myo. cut. (Delto Pectoral) Flap for sub-mental defect	T.F. + P.F.
No. 5 M. - Female	T ₃ N _{1b} M ₀	F.P.	S.H.Y.B. DIS.	T.F. + P.F. + Infolding of F.P.
No. 6 Mu. - Female DXRT	T ₄ N _{1b} M ₀	Rev. F.P. + S.S.G.	Ext. Hemimandibulectomy S.HY.B.DIS.	Rev. F.P.
No. 7 G.S. - Male	T ₄ N _{1b} M ₀	Rev. F.P. + Myo. cut Flap (D.P.)	Seg. Mendibulectomy S.HY.B.DIS.	Rev. F.P.
No. 8 R. - Female	T ₄ N _{1b} M ₀	D. X.	R. T.	Bil. Cheek and Lips
No. 9 H.B. - Female	T ₂ N _{1a} M ₀	D. X.		Aortic Incompetence + VDRL +ve
No. 10 K. - Female	T ₂ N _{1b} M ₀		R. T.	P.R. Closure
No. 11 R1. - Female	T ₂ N _{1b} M ₀		S.HY.B.DIS.	P.R. Closure
No. 12 Rh - Female	T ₂ N ₀ M ₀		S.HY.B.DIS.	P.R. Closure

F.P - Forehead Flap
S.S.G - Split Skin Graft
T.F. - Tongue Flap

P.F. - Palatal Flap
S.HY.B.DIS. - Supra-Hyoid Block-Dissection
DXRT - Radiotherapy

were closely monitored in the intensive care unit for periods ranging from 1 to 3 days.

RESULTS

The forehead flap^{4,5} proved to be a relatively easy and quick method for reconstructing facial defects. The raw area over the forehead was covered with a split skin graft. The deformity in the forehead was minor and well accepted. (Fig. 4).

In two patients moderate restriction to the opening of the mouth was satisfactorily relieved following the release of bands. Swallowing and masticating problems were overcome with self-motivation and re-education, but two of the older patients, aged 73 and 82 years required more than the average time to adapt to their new style of eating.

The tongue flaps did not cause undue restriction to its mobility and a staged division of the pedicle was done under local anaesthesia about 2 weeks later. The same applied to the palatal flaps.

One patient, who had an extensive excision of primary carcinoma with an extended hemimandibulectomy persistently drooled saliva. A temporary prosthetic device was successfully applied. In another patient, the tumour recurred in the form of satellite skin nodules two months following the primary surgical procedure. This was widely excised and skin cover obtained. Of the twelve patients, one died on the 16th post operative day: due to cerebral anoxia sustained on the evening of the operation.

All patients have been followed up for periods ranging from 5 to 14 months. Recurrence of the tumour was noted in two patients. In one, metastasis recurred to the ipsilateral cervical lymph nodes which was treated by a cervical block dissection. In another recurrence of the tumour occurred intraorally and was treated by cytotoxic chemotherapy.

CONCLUSION

A review of 12 patients with carcinoma of the



Fig. 4 Case No. 3 — After reconstruction using a forehead flap and palatal flap for the inner lining.

cheek was carried out. Ten of them were surgically treated with simple re-constructive procedures with minimal facial and functional deformity. Two had recurrence within eight months.

REFERENCES

- ¹ Ramanathan K and Lakshmi "Malignant oral tumours in Peninsular Malaysia. Preliminary report on 2,263 cases". *Med. J. of Malaysia*. 63:4, 342-352 June 1979.
- ² Holman P *et al* "Cancer of the floor of the mouth: S. African Journal of Surgery 13: 147, — 159, 1975.
- ³ Stanley Lee E. and Wilson J S P "Carcinoma involving the lower alveolus". *Brit. J. Surg.* 60: 2, 85-107, 1973.
- ⁴ Mc Gregor I A "The temporal flap in intra-oral cancer, its use in repairing the post excisional defect". *Brit. J. Plast. Surg.* 16, 318-355, 1963.
- ⁵ Lewis M B and Remesnyder J P "Forehead flap for reconstruction after ablative surgery for oral and oropharyngeal malignancy". *Plastic and Reconstructive Surgery*. 62 (1), 59-65, July 1978.