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RESEARCH ARTICLE

RESECTION OF ORAL VERRUCOUS CARCINOMA AND RECONSTRUCTION WITH SPLIT THICKNESS SKIN GRAFT- A CASE REPORT

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ABSTRACT

Verrucous carcinoma (VC) is a variant of well differentiated squamous cell carcinoma with low malignant potential. The most common site of occurrence was the buccal mucosa followed by the mandibular alveolar ridge and gingiva. The treatment of oral verrucous carcinoma remains controversial. Whenever possible surgically, total excision and skin or mucosal grafting is recommended. Here we present a case report of oral verrucous carcinoma which was treated with wide local excision followed by reconstruction with split thickness skin graft.

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INTRODUCTION

Oral verrucous carcinoma is a low-grade, slow-growing, non-metastasizing variant of oral squamous cell carcinoma that most frequently affects the oral mucosa (Jordan, 1995). Ackerman first recognized verrucous carcinoma as a spit tobacco-associated malignancy in 1948 (Ackerman, 1948).The oral cavity is the most common site of occurrence. In addition, it is known to occur in the larynx, pyriform sinus, oesophagus, nasal cavity and paranasal sinuses, external auditory meatus, lacrimal duct, skin, scrotum, penis, vulva, vagina, uterine cervix, perineum, and the leg (Spiro, 1998). Oral verrucous carcinoma is usually extensive by the time of diagnosis, and it is usual for a tumour to be present in the mouth for 2 to 3 years prior to the diagnosis. The lesion appears as a diffuse, well-demarcated painless, thick plaque with papillary or verruciform surface projections (Neville et al., 2002). Various factors have been implicated in the development of oral verrucous carcinoma, including chemical carcinogens, trauma, chronic irritation, and human papillomavirus (Garven et al., 1991). Treatment of oral verrucous carcinoma remains controversial. The selection of treatment is primarily based on effectiveness of control. Surgical removal is recommended over other methods including chemotherapy, radiotherapy. However, verrucous carcinoma with wide involvement often make the total excision difficult. This article describes a simple and effective method involving the wide local excision of the lesion and reconstruction with a split thickness skin graft. This method offers satisfactory result without donor site morbidity and complications.

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CASE REPORT

A 33 year old male patient reported to the Department of Oral and Maxillofacial Surgery at the Haldia Institute of Dental Sciences and Research, Haldia with a painless growth in the right cheek, since three years. He had a positive history of chewing tobacco and betel nuts for about ten years. Patient gave no relevant medical or family history. On general examination patient had normal gait and posture and was well oriented, conscious and moderately built. No evidence of pallor, icterus, cyanosis and clubbing was present. On clinical examination, a white, exophytic, foul-smelling lesion with papillary or verruciform surface projections were observed. The lesion had an approximate dimension of 9x5x1cm and extended antero-posteriorly from the retro-commissural area to posterior buccal mucosa upto the retro-molar trigone area and supero-inferiorly from upper buccal vestibule to approximately 1cm above the lower vestibule. There were no palpable lymph nodes present. Colour of the lesion varied from pink in periphery to frank white in the centre. The lesion was slightly tender and elevated from adjacent mucosa with irregular and firm margins. An incisional biopsy was performed and the biopsy specimen was reported as verrucous

Pre-operative front view profile picture

Pre-operative picture of lesion

Figure A

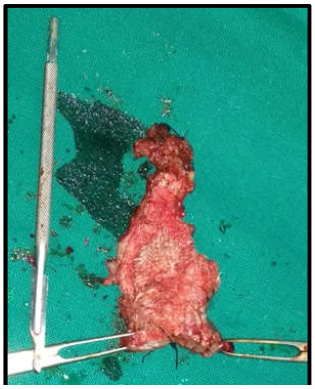


Figure B

Figure C

Figure D

Figure E

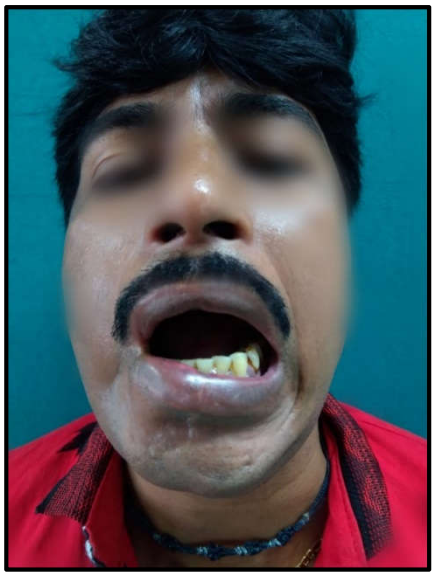
Figure F

Intra-operative Picture- Figure A:- Incision marking; Figure B:- Exciosional biopsy specimen; Figure C:- Harvesting of graft; Figure D:- Figure E:- Placement of graft; Figure F:- Closure of wound

Immediate post-operative front view profile picture

Immediate post-operative lateral view profile picture

3rd month post-operative front view profile picture



3rd month post-operative front view profile picture during mouth opening

3rd month post-operative mouth opening (15 mm)

carcinoma. Preoperative TNM classification was $T_4N_0M_0$.The surgical technique involved a halfapron with lip split incision for gaining access to the posterior tonsillar region. A wide local excision was performed with adequate free margin, keeping in mind the elastic potential of the buccal mucosa.A split thickness skin graft of 12x8cm dimension was then harvested from the right thigh with the help of Humby's knife. The mucosal defect was quilted with the skin graft with absorbable sutures. Pressure dressing was applied to the graft by using a bolster gauze impregnated with whitehead varnish solution, which was tied over the graft and kept in situfor 15 days. The patient was feeded with the help of naso-gastric tube for a period of 15 days to assist in graft uptake. Post-operative recovery of the patient was uneventful. The postoperative histopathological examination of the specimen revealed verrucous carcinoma showing swollen and elongated rete pegs extending into deeper tissues with no sign of cytological atypia. A one and half month follow up of the patient showed excellent healing and complete epithelization of the grafted area.

DISCUSSION

Verrucous carcinoma has a remarkable prognosis with a more conservative surgical treatment as it does not readily undergo metastasis to regional lymph nodes, however, in later stages, it may involve adjacent tissues. Few incidences of metastasis from OVC has been documented (Mehta, 1993). An important consideration in treatment planning for OVC is to determine the need for neck dissection, as the aggressive clinical presentation of the tumour may sway clinical judgment in favour of performing a radial neck dissection as in case of squamous cell carcinoma. However, results of various studies in the literature suggest that lymph node metastasis in case of OVC is rare and a selective dissection should be performed if metastatic nodes are evident along with excision of only adjacent nodes (Oliveira, 2006). Use of free skin grafting for resurfacing all denuded areas inside the mouth after removal of intraoral cancers has become a significant part of the management of patients with such lesions. In the past, the excision was usually limited to the least amount of tissue consistent with a "safe" margin and primary closure was the main objective regardless of the best functional result. Now the use of free grafts has made it possible for the excision to encompass a much larger surface area, and pathologic study of these surrounding mucous membranes has demonstrated that such tissues, in varying extent, should be included routinely in the specimen. Also, with such grafts we have been able to overcome the impaired function resulting from a more local excision and primary closure (Conley, 1954; Slanetz, 1962).

Conclusion

Overall oral verrucous carcinoma have an excellent prognosis with conservative surgical interventions without the necessity of aggressive radical dissections. Skin grafting is a very useful method of reconstruction for specific oral cavity defects. The reconstructive technique revolves around a few key principles that are easily learned, and a successful skin graft allows for the preservation of mastication and speech.

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