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A case report of verrucous carcinoma of maxilla

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Abstract

Verrucous carcinoma is often described as a benign lesion with aggressive potential, as it converts to SCC in long standing cases. Here, we report a case, of verrucous carcinoma of maxilla in a 67 year old female, where the treatment protocol followed was of Hemimaxillectomy using Weber Fergusson’s incision, giving us excellent postoperative esthetics with minimal scarring and no recurrences after a follow up of 1 year post-operatively.

Introduction

Lauren V Ackermann described oral verrucous carcinoma (OVC) in 1948 as a low-grade variant of squamous cell carcinoma (SCC); hence it came to be known as “Ackermann’s tumor” or “verrucous carcinoma of Ackermann. [1] The natural history of this tumor is one of relentless slow growth, frequent recurrences after surgery, marked inflammatory reactions around and a considerable failure to respond to radiotherapy [2.] Clinically, it appears as a proliferative growth with cauliflower-like appearance or it may even present as finger-like projections. These clinical presentations play a big role in its diagnosis. There is a predilection for male in the sixth decade with a slow-growing rate and is commonly seen in chronic tobacco users. Verrucous carcinoma is often described as a benign lesion with aggressive potential, as it converts to SCC in long standing cases. Here, we report a case, of verrucous carcinoma of maxilla in a 67 year old female, where the treatment protocol followed was of Hemimaxillectomy using Weber Fergusson’s incision, giving us excellent postoperative esthetics with minimal scarring and no recurrences after a follow up of 1 year post-operatively.

Case Report

A 67 years female reported to the Department of oral and maxillofacial surgery with the chief complaint of growth in the upper Left buccal vestibule region noted since past 2 week. Patient gave no relevant medical history or history of drug allergies. She gave a personal history of pan chewing since last 10 years. On extra oral examination facial symmetry was noted and no enlargements could be seen.(figure 1) Intra orally an exophytic broad based proliferative lesion of size measuring approximately 5x2 cm was noted with respect to upper left buccal vestibule region extending between the regions of teeth numbering 24 to 28. Lesion was soft in consistency, indurated and tender on palpation. Mucosa overlying the swelling was erythematous and ulcerated. Slight bleeding was also observed from this site. (figure 2)

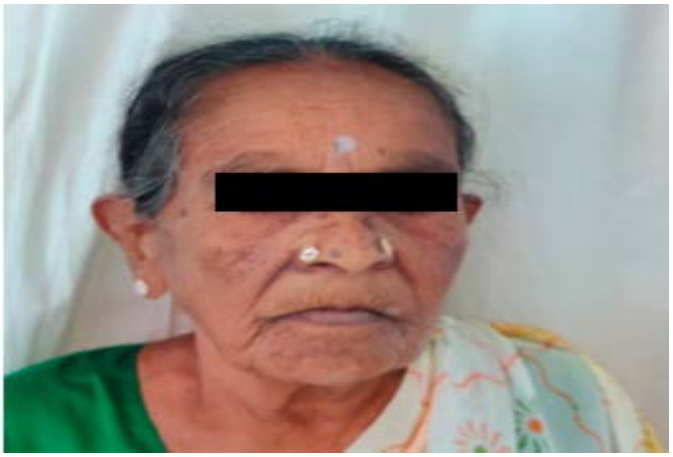

Figure 1: Pre operative profile

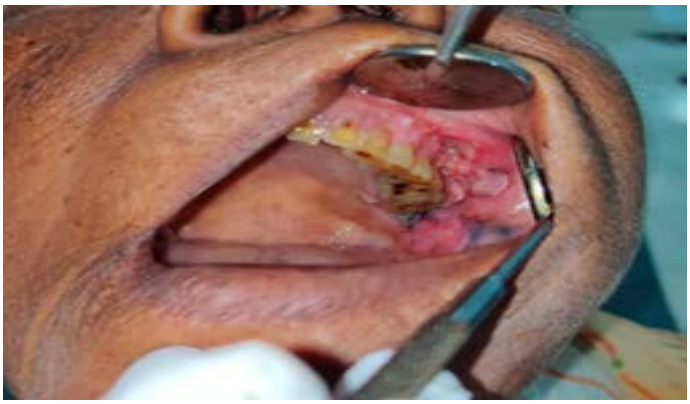

Figure 2 : Exophytic broad based proliferative lesion noted

The OPG reveals no bony involvement poorly defined opacification seen along the roots of involved teeth. Rest all zones of OPG appears to be normal(figure3). Incisional Biopsy from the ulcerated lesion showed well differentiated islands of keratinising cells and cords of tumour cells. The tumour was covered with thick layer of keratinised cells and showed deep papillary in folding filled with keratin debris suggestive of verrucous carcinoma.

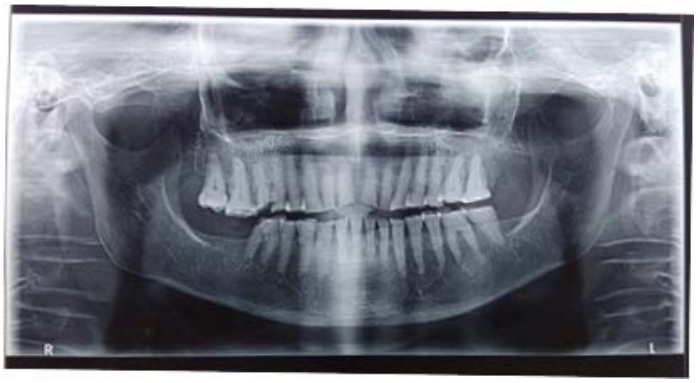

Figure 3: Pre operative OPG reveals no bony involvement

Treatment given- Patient was subjected to hemimaxillectomy under general anaesthesia. Left nasal intubation was done and skin draping and painting was carried out under aseptic protocols. Local anaesthesia with adrenaline (1:80000dilution) was injected to the surgical site to achieve homeostasis along it.

Weber-Ferguson incision was placed along the natural folds of the patient's skin, trying to keep it along the already present wrinkle lines. The incision was also extended intra orally between the tooth number 23 and 24 extended palatally for creation of osteotomy segment. A full thickness flap was then raised to show the involved tumour mass. Extraction of 24 was done to provide a safer segment for the proposed osteotomy.

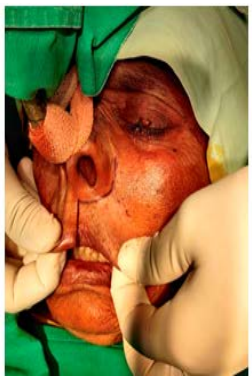
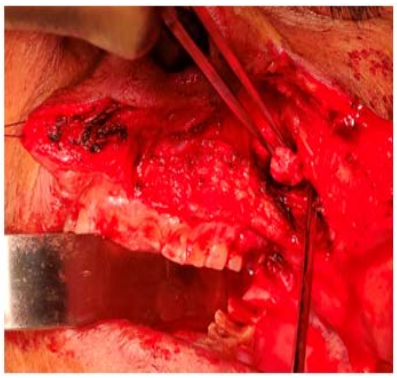

Figure 4: Weber-Ferguson incision placed and a full thickness flap raised

The osteotomy cuts were carried out along the lines of the incision at the extra-oral site starting from infraorbital region then extending to lateral nasal and then connected intraorally to the space between 23 and 25. It was the extended palatally along the alveolar ridge and extended up to the maxillary tuberosity. The dysfunction of the Pterygoid plate was then carried out to complete the osteotomy(figure 5).

A down fracture of maxilla was performed and the resection was completed(figure6)

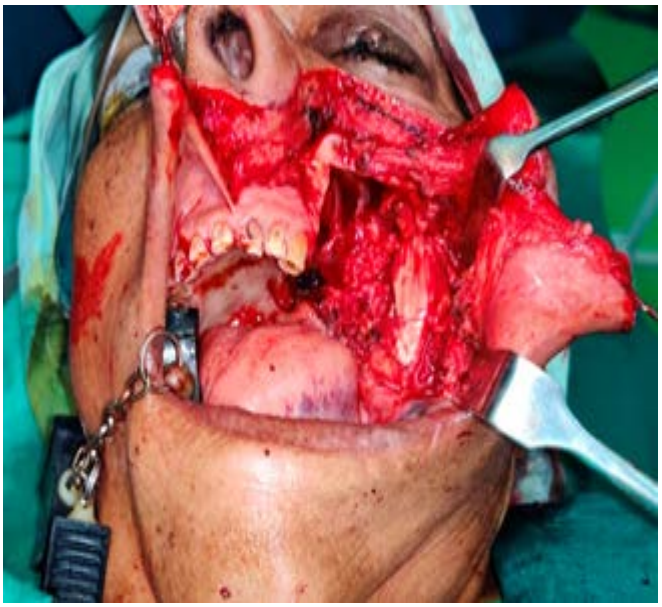

Figure 5 : Hemimaxillectomy

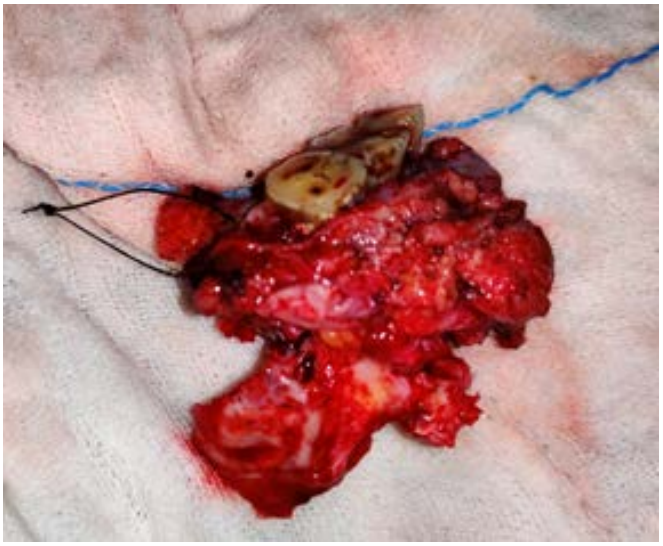

Figure 6: Resection specimen

Betadine saline irrigation was done following which a surgical obturator was placed and packed with a ribbon gauze soaked in BIPP paste.(figure 6)

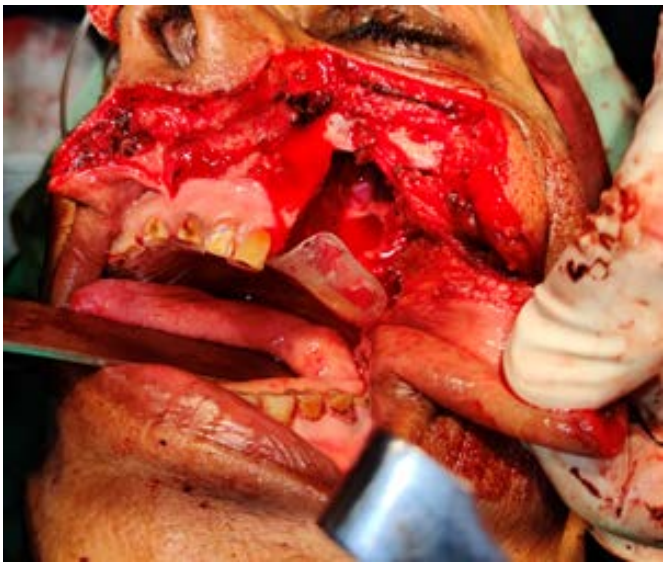

Figure 6 : Surgical Obturator placed

Multilayer closure was done using 3-0 vicryl ad 5-0 prolene. The patient was put on Ryle's nasogastric tube to assist with feeding for the next week(figure 7). The patient was followed up at intervals of 1 month, 6 months and 1 year and residual lesion was assessed post the treatment given. The surgical site healed without any scarring and the patient gave no further history of pain.(figure 8)

Figure 7 : Post-operative

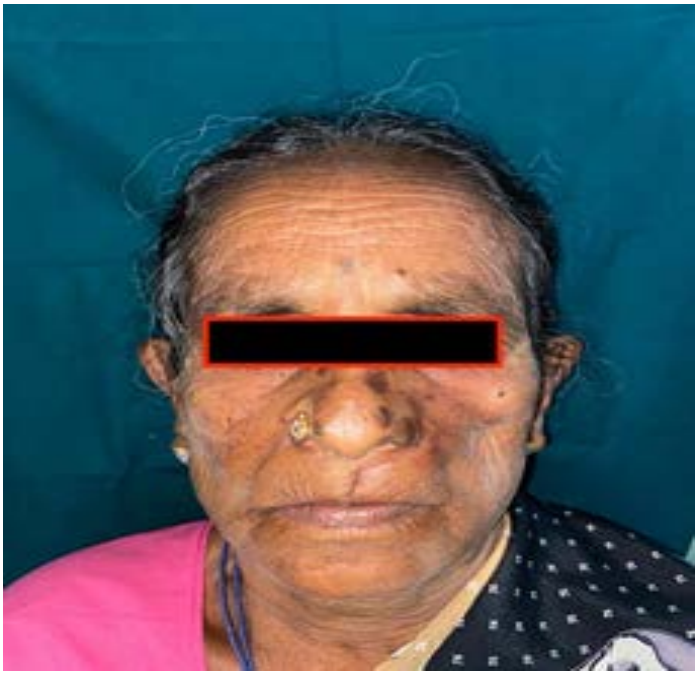

Figure 8 : Follow up at 1 year

Discussion

Ackerman (1948) described verrucous carcinoma involving larynx, skin and reproductive organs. Verrucous carcinoma is characterized by a slow growing, locally invasive growth without metastases and with frequent recurrences [4]. The aetiology is not definitely defined. Various theories like tobacco chewing (3), poor oral hygiene, ill-fitting dentures and recently an association between HPW-16 and HSV has been noted. The most frequent site of verrucous carcinoma of mouth is known to be involving buccal mucosa, mandibular alveolar crest, gingivae and tongue.

Dockertey et al. (1968) believed that tumour cleft could burrow deeply into the substance and hence get converted into the rapidly growing, infiltrating and metastasizing tumour [5]. Michaeles (1976) also believed it to be a recurrent lesion unless excised radically, hence total removal of maxilla in this case was justified. Occasionally the rete pegs of tumour cells could be very wide and irregular and the actual differentiation from a well-developed squamous cell carcinoma may be difficult on histopathological analysis[6]. Michaeles (1976) even questioned the wisdom of differentiating the verrucous carcinoma as separable entity from the squamous cell tumors .Weber Ferguson incision indicated for tumors involving the maxilla provides a wide access to all areas of maxilla. Incision line is drawn through the vermillion border, along the philtrum of the lip, extending around the base of the nose & along the facial nasal groove. It extends infra-orbitally at a distance of 3-4 mm below the cilium to the lateral canthus. Tarsorrhaphy sutures are placed in eyelid to aid its retraction and protection. Incision is made through skin & subcutaneous tissue along the nose and upper lip is transected and the labial artery ligated whenever encountered. Many modifications have been suggested to aid in increasing the extension of this incision including Lynch's extension, Borle's Extension and Dieffenbach Extension [10].

Although treatment with carbon dioxide laser (Flynn et al, 1988) and radiotherapy (Bacon et al, 1988 : Nair et al, 1988) has been suggested, we preferred surgical and radical excision of it rather than to leave chances for recurrences and the metastasis after malignant transformation of the tumour. Kamath et al (1988) have stressed the importance of adequate nutrition and cessation of the harmful habits in these cases, this was

taken care by stopping the areca nut and betel chewing and encouraging good nutrition for the patient [8]. A habit cessation counselling was also done for her and her family to help her improve her quality of life.

Conclusion

A multifaceted approach to treat cancers of head and neck is the key for successful treatments. The surgical plan proposed by us removed the chances of any residual tumors and prevented the need for additional radiation therapy. The incisions were placed keeping in mind the patient's facial esthetics and postoperatively care was given to provide habit counselling and frequent follow-ups were undertaken to ensure the same. Due diligence have to be given when such cases come to smaller centers to help improve the total quality of life for the patients.

Chemotherapy and immunotherapy are reported modalities of treatment but no study proves its efficacy for verrucous carcinoma and hence should not be advocated as an alternative to surgery.

When we talk about prognosis factor of such lesions then we can conclude that verrucous carcinoma is better than other life-threating malignancies if treated adequately.

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