A Case of Gingivobuccal Coplex Cancer of Anterior Maxilla in a 14 Year Old Child

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Introduction: Squamous cell carcinoma (SCC) of the oral cavity ranks as the 12th most common cancer in the world and the 8th most frequent in males. SCC is extremely unusual in the pediatric population and researchers believe that the pathology of SCC in pediatric patients is a separate entity different from SCC in the adult population. **Case Report:** A 14 year old girl patient with ill-defined swelling with 1.5 x 4cm ,ulcerated surface texture along with tiny bleeding points was came to department of Oral and Maxillofacial Surgery K.D, Dental College & Hospital Clinically the lesion appears to be a benign soft tissue tumor with provisional diagnosis of peripheral giant cell granuloma. Pre-surgical investigations which were carried out were found to be within normal range. Radiographic examination did not reveal any significant bone loss in relation to the maxillary right anterior teeth or bone. **Results:** SCC of gingiva by histopathological examination was confirmed and patient referred to nearby cancer institute for definitive treatment. **Conclusion:** Despite the fact that SCC has been frequently reported in old male patient, here, we reported a case of young female patient. Since the early detection of SCC is vital, presence of SCC in younger patients also needs to be considered by paediatrics.

Keywords : Carcinoma; Gingivobuccal Complex; Gingival Neoplasms; Oral; Paediatric Cancer

Introduction

Oral squamous cell carcinoma (SCC) is rare in pediatric patients. It happens approximately 1 in 1,000 cases of patients under age 21. SCC in pediatric patients is believed to be etiologically distinct from adult SCC (1). This lesion ranks as the 12th most common cancer in the world and the 8th most frequent in males (2). There are no universally accepted treatment guidelines due to the rarity of pediatric head and neck cancers.

Bhanu P *et al.*, revealed a favorable survival for patients treated with surgery alone or surgery followed by adjuvant radiation. The patterns of care delivered in their study also reflected those of adult patients with head and neck squamous cell carcinoma) (HNSCC) (3, 4).

Squamous cell carcinoma is a malignant epithelial neoplasm characterized by variable clinical manifestations. When located in the gingiva, this neoplasm may mimic common inflammatory lesions. This neoplasm is generally more frequent in male than in female, but this is not observed in cases of SCC located in the gingiva (5).

The gingiva SCC clinical presentation can be quite variable, appearing as a region of ulceration or as an exophytic, granular or verruciform development (6). It may present as an endoperiodontal lesion, (7) gingival erythema, (8) or as a painless, asymptomatic, elevated lesion (9, 10). Gingival SCC is normally painless and it is located in the keratinized tissue. In advanced stages, it is aggressive and it has easy access to infratemporal fossa (5). Malnutrition may be the causative factor in the development of OSCC when factors such as hepatic disease, pulmonary diseases are ruled out.

Case Report

A 14 year old girl patient came to department of Oral and Maxillofacial Surgery K. D. Dental College & Hospital, Mathura with chief complaint of painless swelling and bleeding from gingiva since 6 months which gradually increased to present size. Patient gave history of pain since 10 days for which patient seeks treatment. Pain is mild to moderate continuous in nature.

Figure 1. Showing Gingivobuccal complex neoplasm resembling benign inflammatory lesion

Figure 2. No significant bone loss seen on I.O.P.A. radiograph in gingivobuccal growth region

Figure 3. Orthopantamograph showing no significant bone loss in the region of gingivobuccal growth

Clinical/Radiographical examination

On examination the lesion was round circular gingival swelling which is soft in consistency, slow growing growth seen in right upper quadrant of mouth. Facial asymmetry & bulge seen on right side of face, causing elevation upper lip on right side. Patient was aware of this swelling since 6 months. The swelling was roughly 1.5 x 4cm in size with ill-defined margins and border, ulcerated surface texture along with tiny bleeding points (Figure 1). Patient revealed that bleeding become more frequent upon brushing in region of lesion 10 days back before examination. Patient did not give any history of any kind of deleterious oral habit. Her family history was unremarkable. Clinically the lesion appears to be a benign soft tissue tumor with provisional diagnosis of peripheral giant cell granuloma. Pre-surgical investigations which were carried out were found to be within normal range. Intra-oral periapical radiograph & orthopantomograph did not reveal any significant bone loss in relation to the maxillary right anterior teeth or bone (Figure 2, 3). As there was neoplastic potential of the lesion excisional biopsy was planned out (Figure 4, 5). Intra-operatively associated teeth # 12, 13, 14, 15 and bone also removed along with the gingival growth for histopathological examination under general anesthesia. Healing was found to be unsatisfactory.

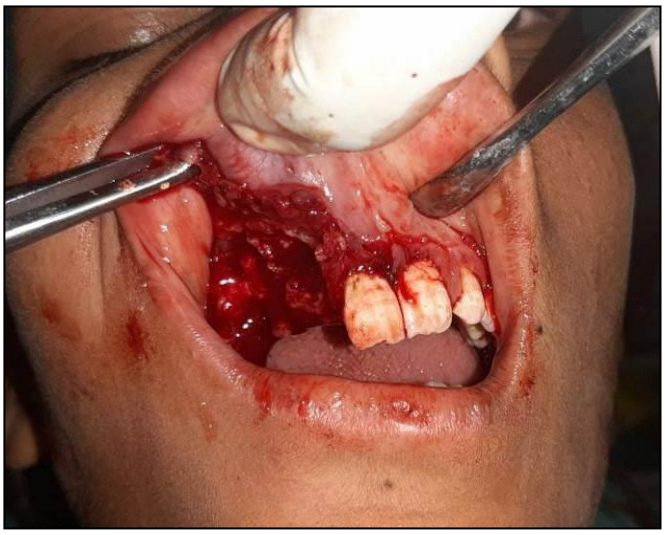

Figure 4. Excisional biopsy performed to remove gingivobuccal com

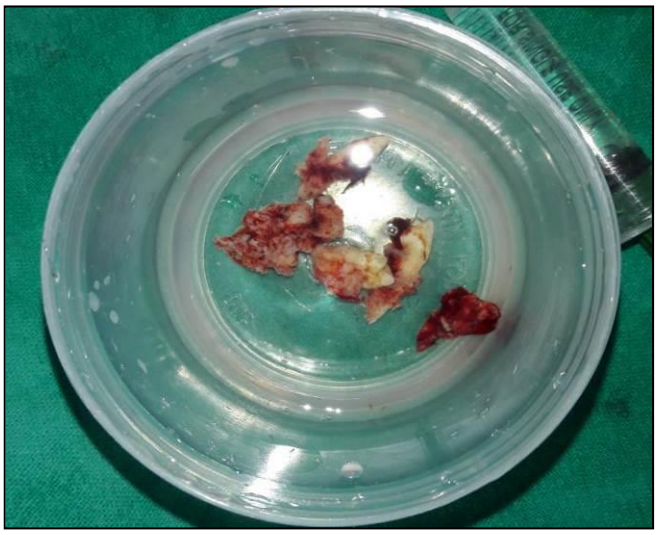

Figure 5. Excised specimen showing Gingivobuccal complex growth, along with hard tissue such as involved bone and tooth

Results

SCC of gingiva by histopathological examination was confirmed and patient referred to nearby cancer institute for definitive treatment.

Discussion

SCC is the most frequent malignant neoplasm of the adult oral cavity, corresponding to 96% of all malignant tumours in this region. (5). If one excludes carcinoma of the lip vermilion, the most common sites for intraoral squamous cell carcinoma are the lateral/ventral tongue and floor of the mouth. However, the gingiva is the next most common site for SCC, accounting for 14% to 22% of all cases (9). Many clinicians believe that this disease is particularly aggressive in young patients, and is associated with poorer survival compared to adults (1). As malignant mucosal lesions being infrequently found in pediatric population. Due to the rarity of oral cavity malignancies in pediatric patients, the differential diagnosis of SCC is often not regarded. In the pediatric population, SCC accounts for fewer than 2% of all head and neck malignancies. The pediatric oral cavity SCC is even more rare, and people impacted <15 years old are exceedingly rare, with only a few case reports of pediatric oral SCC reported in the medical literature (2, 7, 8).

In some cases of paediatric squamous cell cracinoma, the contributing risk factor might be a genetic syndrome such as Fanconi Anemia, xeroderma pigmentosum, keratosisichthyosis-deafness (KID) syndrome or an as-yet unidentified genetic risk factor. Less common would be a secondary malignancy following chemotherapy or radiotherapy (1). Other exposures are suggested to carry an increased risk for oral cavity SCC in the pediatric population; however, the evidence supporting these factors is conflicting. These includes polyvinyl chloride (found in plastics), the Epstein-Barr virus, and the human papilloma virus (11, 12).

Early detection of SCC is vital as the prognosis is directly related to the size of the lesion. Lesions measuring less than 1 cm are amenable to cure and have a good long-term prognosis.8 9. It is also common for carcinoma of the gingiva to metastasize with carcinoma of the mandibular gingiva metastasizing more frequently than tumors of the maxillary gingiva (6, 9).

Histopathological examination revealed hyper keratinized stratified squamous epithelium shows hyperplasia, areas of papillary projections and dysplastic changes overlying a connective tissue stroma suggestive of well diffrentiated Squamous cell carcinoma of gingiva. A combination of orthopantomogram and bone scintigraphy is recommended in early invasion.

Magnetic resonance imaging (MRI) is more sensitive than computerized tomography (CT) for bony invasion. CT scanning gives additional information regarding the extent of involvement, malignant infiltration and cervical nodal disease.

MRI can be used to determine soft tissue and perineural involvement. Ultrasound guided fine needle aspiration cytology (FNAC) has the highest accuracy in diagnosing cervical nodal metastasis in the clinically negative neck compared to ultrasonography, CT scan and MRI (2).

The treatment of choice for pediatric oral SCC is wide local resection while attempting to avoid the significant impact of radiotherapy in the pediatric population, including sequela, such as secondary malignancy (11, 12).

Radiotherapy is usually not the preferred modality of treatment for early gingivobuccal complex cancer. It is used either postoperative adjuvant treatment or as definitive treatment for advanced cancer with or without chemotherapy. Chemotherapy has been used as neo-adjuvant, adjuvant or palliative treatment. Considering that some of the more severe lesions may mimic common periodontal infections, clinician must be aware that lesions that do not respond normally to routine therapy should be biopsied (5).

Conclusion

Despite the fact that SCC has been frequently reported in old male patient, here, we reported a case of young female patient. Since the early detection of SCC is vital, presence of SCC in younger patients also needs to be considered by pediatrics.

Conflict of Interest: 'None declared'.

References

1. Bhanu Prasad V, Mallick S, Upadhyay AD, Rath GK. Systematic review and individual patient data analysis of pediatric head and neck squamous cell carcinoma: An analysis of 217 cases. Int J Pediatr Otorhinolaryngol. 2017;92:75-81.
2. Binahmed A, Charles M, Campisi P, Forte V, Carmichael RP, Sandor GK. Primary squamous cell carcinoma of the maxillary alveolus in a 10-year-old girl. Journal (Canadian Dental Association). 2007;73(8):715-8.
3. Cabral LA, de Carvalho LF, Salgado JA, Brandao AA, Almeida JD. Gingival squamous cell carcinoma: a case report. Journal of oral & maxillofacial research. 2010;1(3):e6.
4. Craig RM, Jr., Vickers VA, Correll RW. Erythroplastic lesion on the mandibular marginal gingiva. Journal of the American Dental Association (1939). 1989;119(4):543-4.
5. Heller AN, Klein A, Barocas A. Squamous cell carcinoma of the gingiva presenting as an endoperiodontic lesion. Journal of periodontology. 1991;62(9):573-5.
6. Kirkham DB, Hoge HW, Sadeghi EM. Gingival squamous cell carcinoma appearing as a benign lesion: report of case. Journal of the American Dental Association (1939). 1985;111(5):767-9.
7. Misra S, Chaturvedi A, Misra NC. Management of gingivobuccal complex cancer. Annals of the Royal College of Surgeons of England. 2008;90(7):546-53.
8. Modh A, Gayar OH, Elshaikh MA, Paulino AC, Siddiqui F. Pediatric head and neck squamous cell carcinoma: Patient demographics, treatment trends and outcomes. Int J Pediatr Otorhinolaryngol. 2018;106:21-5.
9. Morris LG, Ganly I. Outcomes of oral cavity squamous cell carcinoma in pediatric patients. Oral oncology. 2010;46(4):292-6.
10. Shafer WG. A text book of oral pathology. Cherubism. 1983:699-702.
11. Sidell D, Nabili V, Lai C, Cheung G, Kirsch C, Abemayor E. Pediatric squamous cell carcinoma: Case report and literature review. Laryngoscope. 2009;119(8):1538-41.
12. Wallace ML, Neville BW. Squamous cell carcinoma of the gingiva with an atypical appearance. Journal of periodontology. 1996;67(11):1245-8.

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