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Up-to Date Review And Case Report

Oral papillary squamous cell carcinoma (OPSCC): a rare presentation in the palate

K.P. Karthik, R. Balamurugan*, T. Sahana Pushpa

RYA COSMO Foundation Hospital, Chennai, India

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Abstract – Introduction: Oral papillary squamous cell carcinoma (OPSCC) is a rare variant of squamous cell carcinoma with an unusual presentation in the palate. **Observation:** This case report presents a 68 year old male who reported with pain in the roof of the jaw for the past one month. The patient gave a history of a small ulcer over the right palatal region since a year which gradually increased in size. History also revealed that he was a tobacco chewer for around five years and had quit the habit one year back. Clinically, a proliferative growth in the right palatal region was apparent. The growth was firm in consistency and had well-defined borders that crossed the midline of palate. Based on the noticeable clinical signs, the case was provisionally diagnosed as verrucous carcinoma. Histopathology report of the incisional biopsy confirmed the case to be non-invasive oral papillary squamous cell carcinoma. **Commentary:** OPSCC displays either a papillary variant or exophytic pattern. It has a better prognosis than squamous cell carcinoma of similar clinical stage but is worse than verrucous carcinoma. **Conclusion:** Since OPSCC may mimic other benign conditions of oral cavity, evaluation of clinical parameters that are associated with the risk of carcinoma is mandatory. This article highlights the significance of histopathological examination that aids the clinician to arrive at a diagnosis for any suspicious papillary lesions.

Introduction

Oral papillary squamous cell carcinoma (OPSCC) is a rare, unusual variant of squamous cell carcinoma with favourable prognosis [1]. Individuals belonging to sixth and seventh decades of life are frequently affected by OPSCC and there is a slight male predilection. Only 70 cases of OPSCC affecting larynx, oropharynx and nasopharynx have been reported in English literature [2,3]. Clinically, OPSCC manifests as an exophytic or papillary growth of tumor size ranging from 2 mm upto 4 cm [2]. Histopathologically, the tumor is characterised by finger like papillary projections with hyperkeratinised surface epithelium and increased mitotic figures [4]. The primary treatment modality of OPSCC is surgical resection of the tumor. Cases with laryngeal involvement are treated with excision, vocal cord stripping and laryngectomy in conjunction with radiotherapy [4].

Observation

A 68 year old male patient reported to the department of oral and maxillofacial surgery with a chief complaint of pain in the roof of the jaw since a month. History revealed that the patient developed a small ulcer on the right palatal region which gradually grew in size over a period of one year. He also complained of having had burning sensation while consuming spicy foods. The patient also had the habit of chewing tobacco for more than five years and he quit the habit one year back. Clinically there was no evidence of any extraoral findings. Intra oral examination showed a proliferative growth measuring 2.5cm x 2.5cm in the palatal region in relation to the maxillary right second premolar, first molar and second molar. The lesion was firm in consistency with well-defined borders. The growth was seen to be crossing the midline of palate (Fig. 1). Radiograph showed no evidence of any abnormalities. Based on these clinical findings the case was provisionally diagnosed as verrucous carcinoma. Incisional biopsy was performed and three greyish white brownish soft tissue measuring approximately (0.7cm × 0.1cm × 0.3cm), (0.6cm × 0.4cm × 0.2cm) and (0.6cm × 0.3cm × 0.2cm) were sent for histopathological examination. Hematoxylin and eosin stained soft tissue section showed a stratified squamous epithelium exhibiting papillary projections with thin connective tissue core. The surface of the epithelium exhibited hyperparakeratinisation and dysplastic features such as increased mitosis, cellular and nuclear pleomorphism, nuclear hyperchromatism, individual cell keratinisation and basilar hyperplasia (Fig. 2). Epithelial invasion into the connective tissue was not evident which confirmed the diagnosis to be a non-invasive papillary squamous cell carcinoma.

* Correspondence: bala100192@gmail.com

Fig. 1. Proliferative growth measuring 2.5 cm × 2.5 cm in the right palatal region crossing the midline.

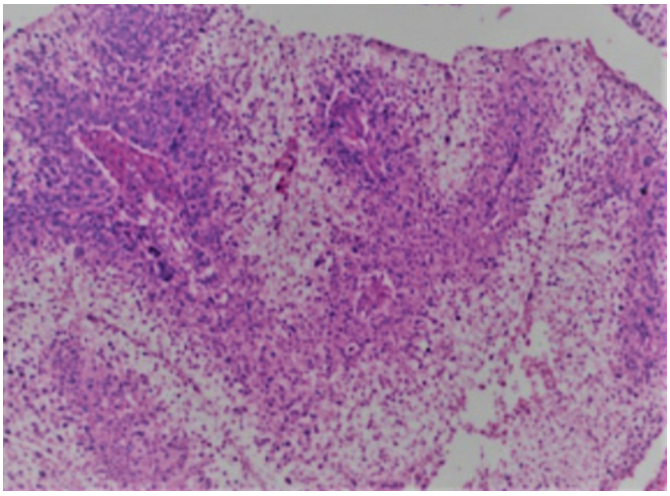

Fig. 2. Stratified squamous epithelium exhibiting papillary projections with thin connective tissue core.

Commentaries

Oral papillary squamous cell carcinoma of head and neck is a rare variant of squamous cell carcinoma [1]. OPSCC is frequently seen affecting the older aged individuals especially people above 60 years of age. Ding *et al.* [2] reported in a study comprising of 12 OPSCC cases where the mean age of the patient was 72.9 years and all were in the initial stage of lesion which showed a similar correlation with a study by Argyris *et al.* [5] where the author reported the mean age of patients to be 71.96 years. While considering the gender distribution, OPSCC has a slight male predilection [6] which had a positive association with this case report. Argyris *et al.* [5] and Ding *et al.* [2] reported that females are prone to OPSCC than men with a female to male ratio of 1.75:1 and 1.4:1, respectively.

Clinically OPSCC presents as a soft, friable, polypoid, exophytic, papillary growth ranging from 0.3 cm to 6 cm in size [4]. Russell *et al.* [7], categorised 52 cases of OPSCC based on the frequency of the sites of occurrence and recorded that 36.5% of OPSCC affected larynx, 34.6% of OPSCC affected the oral cavity, 15.4% of cases were seen in sinonasal tract and 13% in oropharynx. Specific sites for the occurrence of OPSCC in oral cavity are rarely mentioned in the English literature [8]. In recent studies, Bao *et al.* [9] reviewed 56 cases of OPSCC and stated that gingiva is the most common site followed by buccal mucosa, tongue, palate, lower lip, floor of mouth and oropharynx. OPSCC closely resemble the features of verrucous carcinoma which is a neoplasm exhibiting hyperkeratosis with a broad pushing retepegs showing no evidence of invasion. In contrary, OPSCC shows malignant changes such as papillary architecture, minimal keratinisation and atypical features.

Two variants of OPSCC have been described: a papillary form and a broad based exophytic form [8]. The papillary pattern consists of thin, multiple, finger like papillary projections supported by fibrovascular core. However, exophytic pattern is characterised by a broad based bulbous to exophytic proliferations with round projections [5]. Invasion of tumor may not be determined in incisional biopsy obtained from superficial lesions [4]. In a study by Argyris *et al.* [5] the author observed invasion of tumor in 40 cases (91%) and in 1 case (2%) there was no invasion. Such challenges may be attributable to the sub-optimal thickness of the incisional biopsy which suggests that adequate depth of biopsy would be required to diagnose OPSCC.

The clinical implications of non-invasive OPSCC and the transformation of non-invasive to invasive neoplasm are not yet understood. Currently, it is recommended that papillary form or non-invasive OPSCC should be treated based on the stage of invasion [4,10]. OPSCC is an infiltrative carcinoma yet it tends to have better prognosis than the squamous cell carcinoma of similar clinical stage but worse than verrucous carcinoma [4,8,11].

Conclusion

This case report displays a rare case of oral papillary squamous cell carcinoma involving palate. Since it mimics certain benign conditions of oral cavity, evaluation of clinical parameters associated with the risk of carcinoma becomes mandatory. This article highlights the significance of histopathological examination to arrive at a diagnosis for suspicious papillary lesions.

Conflicts of interests: The authors declares that they have no conflicts of interest in relation to this article.

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