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Introduction

1. Squamous cell carcinoma (SCC) of the oral cavity **occurs in males in their sixth or seventh decade.**
2. Younger patients (aged less than 40years) account for approximately 4% of all oral cancers.
3. Only a small sample of this subgroup exists of pediatric patients (≤ 20 years), making oral SCC in the pediatric age group an extremely rare entity.

Case report

An 11-year-old boy was referred to the Department of Oral and Maxillofacial Surgery by his orthodontist because of **a non-tender, progressive growing swelling of the gingiva of the upper front teeth**, noticed by the patient since 6 weeks. The relevant medical history did not reveal any abnormalities. The patient did not use any medication at presentation.

Physical examination :



1. A **firm, non-tender, verrucous swelling with indurated borders and central ulceration** on the buccal and palatal aspects of the left upper front teeth measuring **2.5 cm by 2.0 cm.**
2. The left upper incisors were mobile but tested positive on vitality tests.
3. Multiple, nontender, mobile submandibular lymph nodes were palpated bilaterally.

Radiographic examination :

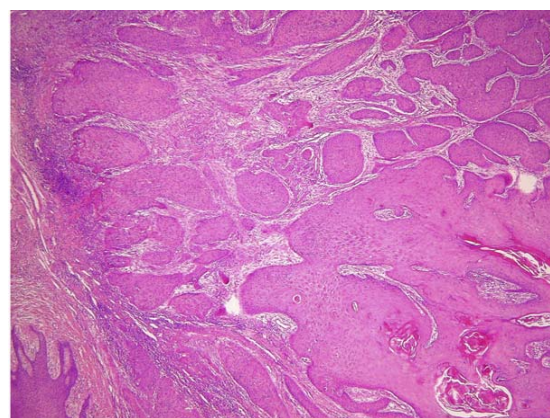
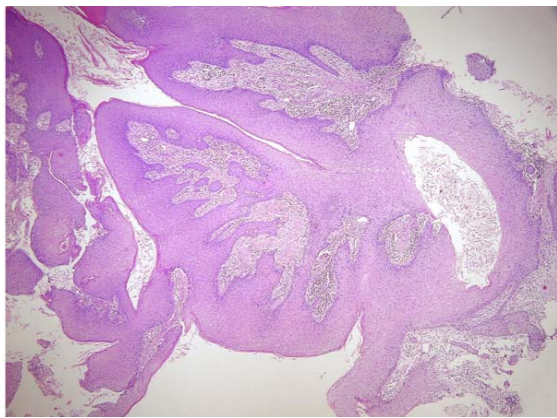
1. Possibly infiltration of several millimeters of the alveolar bone between the two left upper incisors was observed.



Computed tomogram revealed invasion of the buccal cortex of the left upper incisors

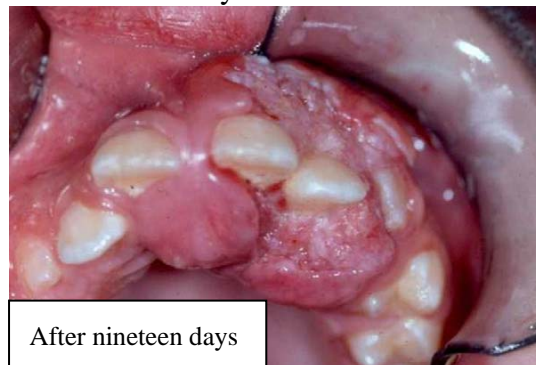
Histopathological examination :

Because of the age of the patient there was some doubt about the diagnosis:



a verruciform xanthoma with characteristics of pseudoepitheliomatous hyperplasia (PEH)

1. Fine needle aspiration cytology of the submandibular lymph nodes as well as a radiograph of the chest there were no signs of regional and/or distant metastasis.
2. Nineteen days after the initial



After nineteen days

presentation the tumor was diagnosed as a **T4aN0M0 SCC** of the gingiva of the left maxilla. A partial maxillectomy was performed. The former diagnosis of a well-differentiated SCC was confirmed on histopathological examination of the surgical specimen. The margins seemed to be free of tumor.

Discussion

1. Less than 4% of these cancers occur in patients younger than 40 years of age. [Only a small sample of this subgroup exists of pediatric patients (≤ 20 years)]

Table 1 Summary of studies and case reports reporting oral squamous cell carcinoma in pediatric patients (≤ 20 years) (1970–2005)

Authors	Year	Country	No. of patients	Gender (M/F)	Age (years)	Site	Histology (differentiation)
Byers [3]	1975	USA	4	Unknown	17, 19, 19, 19	Tongue, n = 4	Well, n = 1; moderate, n = 1; poor, n = 1
Krolls and Hoffman [8]	1976	USA	19	Unknown	14, n = 3; 15–19, n = 16	Unknown	Unknown
Harper and Copeman [5]	1981	UK	1	1/0	18	Tongue	Poor
Yagi K et al. [18]	1981	Sudan	1	0/1	10	Tongue	Well
McGregor et al. [11]	1983	Canada	1	0/1	18	Tongue	Unknown
Newman et al. [12]	1983	USA	4	Unknown	14, 16, 18, 18	Tongue, n = 4	Unknown
Son and Kapp [15]	1985	USA	4	3/1	10, 17, 18, 19	Tongue, n = 2; cheek, n = 1; gingiva, n = 1	Well, n = 4
Sacks et al. [13]	1985	USA	1	1/0	13	Gingival	Well
Earle et al. [4]	1988	USA	1	1/0	7	Gingiva	Moderate
Keukens et al. [7]	1989	The Netherlands	1	1/0	9	Tongue	Well
Lund and Howard [10]	1990	UK	1	Unknown	20	Tongue	Unknown
Tsukuda et al. [17]	1993	Japan	4	2/2	14–19, n = 4	Unknown	Unknown
Sarkaria and Harari [14]	1994	USA	1	1/0	17	Tongue	Unknown
Atula et al. [1]	1996	Finland	1	1/0	19	Tongue	Unknown
Thompson et al. [16]	1999	USA	20	10/10	2–20	Tongue n = 9; lip n = 6; unknown n = 5	Well–poor
Bill et al. [2]	2001	USA	1	1/0	14	Gingiva	Well

2. Recently it has been observed that there is an increasing incidence of oral SCC in the younger population of several countries.
[traditional risk factors such as tobacco, alcohol, betel quid chewing, and low consumption of fruits and vegetables]
3. There is a general trend in reported studies for SCC of the oral cavity in young patients to be particularly **aggressive** and **carry a poorer prognosis** than older patients
 - (1) a differing disease etiology and tumor behavior.
 - (2) delay in presentation and/or diagnosis (patients’ and/or doctors’ delay)
4. As inflammatory lesions in pediatric patients can become highly proliferative and assume neoplasmlike characteristics. **Pseudoepitheliomatous hyperplasia (PEH), a reactive process, may then be difficult to distinguish from SCC.**
[PEH in pediatric patients may exhibit cellular atypia and irregular growth to such extend that this distinction may be less obvious.]

題號	題目
1	Which one of the following is not the precancerous lesion ? (A) Verruciform xanthoma (B) Proliferative verrucous leukoplakia (C) Oral submucous fibrosis (D) Erythroleukoplakia
答案(A)	出處：oral and Maxillofacial pathology P.357
題號	題目
2	Which one of the following is the most common site for intraoral carcinoma? (A) Gingival (B) Buccal mucosa (C) Tongue (D) Oral floor
答案(C)	出處：oral and Maxillofacial pathology P.361

