Delay in Diagnosis of Oral Squamous Cell Carcinoma; A Report from The Netherlands

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The referral pattern, patients' and doctors' delay of a limited number of 50 patients suffering from oral squamous cell carcinoma have been investigated. The majority of the patients consulted the family doctor as the first source of help. The mean patients' and doctors' delay was 103 and 22 days, respectively the median being 35 and 11 days, respectively. The gender, dental status, site and tumour size did not show a significant correlation with the delay. Measures directed to the early detection of oral cancer should place special emphasis on the patients' delay.
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INTRODUCTION

IN THE NETHERLANDS the majority of patients with head and neck cancer are treated in specialised centres. The referral to such a centre can be made by a family doctor, a dentist or a medical or dental specialist.

The purpose of this study is to evaluate the patients' and doctors' delay in 50 Dutch patients suffering from a squamous cell carcinoma of the oral cavity. The delay has been related to the referral pattern and patient variables, such as age, gender, dental status, tumour size and site.

PATIENTS AND METHODS

In the period from June 1990 to July 1991, 50 consecutive patients with a histologically proven primary and untreated squamous cell carcinoma (SCC) of the oral cavity have been examined. These patients had been referred to the Department of Oral & Maxillofacial Surgery and Oral Pathology of the Free University Hospital in Amsterdam, The Netherlands. The referral pattern has been followed until the visit at our department. 29 patients were edentulous and 21 were (partially) dentulous. All but 2 patients were Dutch natives.

Of the 50 patients studied, seven asymptomatic carcinomas had been detected by the dentist at a routine dental examination; in 2 other cases the oral and maxillofacial surgeon detected the SCC in patients who had been referred for extraction of one or more teeth. These 9 patients have been excluded from further analysis.

Patients' delay was defined as the time period between the point of noticing a discomfort in the mouth until the first visit, mostly to the dentist or family doctor. Doctors' delay was defined as the time period which elapsed from the first consultation until the final diagnosis. The patients' delay and doctors' delay together were defined as overall delay.

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Table 1. Distribution of 41 patients with oral squamous cell carcinoma by the T classification and localisation [1]

	T1	T2	T3	T4	T1–T4
Tongue	8	5	—	1	14
Floor of mouth	4	2	5	1	12
Lower alveolar ridge	2	2	2	2	8
Buccal mucosa including retromolar trigone	2	3	1	—	6
Upper alveolar ridge	—	—	—	1	1
All sites	16	12	8	5	41

The lesions have been staged according to the TNM classification, including the definition of the various subsites of the oral cavity (Table 1) [1].

For the statistical analysis of the data Fisher's exact test has been used in case of a 4-fold table. Where the columns of a $2 \times k$-contingency table represent an ordinal classification the test for trend in proportions has been used [2]. The results were considered statistically significant if the P-value was ≤ 0.05.

RESULTS

The patients' and doctors' delay have been summarised in Tables 2 and 3, respectively. The patients' delay varied from one week to two years, with a mean of 103 days and a median of 35 days. The doctors' delay ranged from 1 day to 6 months with a mean of 22 days and a median of 11 days. The overall delay ranged from 14 days to 2 years, with a mean of 125 days and a median of 46 days.

There was no significant difference in doctors' delay when comparing dentists and physicians. The age, gender and dental status did not significantly correlate with the overall delay. Specific localisations and the T staging did not influence the overall delay.

Table 2. Patients' delay in 41 patients with oral squamous cell carcinoma

	0–4 weeks	5–16 weeks	>16 weeks	Total
No. of patients	19	12	10	41

Table 3. Doctors' delay in 41 patients with oral squamous cell carcinoma correlated with the professional source first consulted

	0–4 weeks	5–16 weeks	>16 weeks	All periods
Dentist	8	3	1	12
Family doctor	22	4	1	27
Specialist*	1	1	—	2
Total	31	8	2	41

*2 patients directly consulted the dermatologist to whom they were familiar because of unrelated skin lesions.

DISCUSSION

The importance of a regular dental check-up is well demonstrated by the fact that the dentist detected an asymptomatic carcinoma in seven cases during routine intraoral examination. However, in 2 other patients, who had been referred by the dentist for extraction of one or more teeth, the oral carcinoma had apparently remained unnoticed to the dentist.

In this study the mean overall delay is in agreement with the findings in other countries [3–5]. The fact that no significant correlation was found between the overall delay and age, gender, size and localisation of tumour is also in agreement with the results from most other studies [4, 5]. Only Mashberg *et al.* found that patients with T1 cancers more frequently had shorter overall delay than patients with larger lesions [6].

The majority of the patients with symptomatic oral carcinoma consulted the family doctor first rather than the dentist, which is in agreement with the literature [2, 7, 8]. The dentist was mainly confronted with lesions of the alveolar ridge and floor of mouth, which suggests that complaints due to the dentition or dentures are usually the reason for consulting the dentist. This result is in agreement with our previous study on referral pattern of various mucosal lesions [9]. In that study it has been suggested that the family doctor is consulted in case of symptoms which in the patient's view do not seem to be related to the dentition or dentures. Furthermore, 50% of the patients in the present study did not have a dentist, which also explains the preference for the family doctor.

Due to the limited number of patients in this study, the outcome of the statistical analysis should be interpreted carefully. Although in some cases no significance could be shown, there might still be differences between the groups compared.

Early detection of cancer generally results in a better prognosis. Considering the time interval of the delay in diagnosis in this study, one should especially try to reduce the patients' delay. In particular, patients older than 50 years with a history of tobacco and alcohol use should be encouraged to visit the dentist regularly, as they are known to have a higher risk of developing oral cancer [10]. Furthermore, as cardiovascular, pulmonary or liver diseases are often related to tobacco or alcohol habits, patients suffering from these diseases are also known to have a higher risk of developing oral cancer. For that reason, regular examination of the oral cavity should be advocated in these patients.

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