Oral Oncology 94 (2019) 123–124

Contents lists available at ScienceDirect

Oral Oncology

journal homepage: www.elsevier.com/locate/oraloncology

Letter to the editor

Why refer possible oral cancer to the dentist for assessment?

To the Editor,

The dentists' curriculum includes the acquisition of sufficient knowledge of basic clinical medicine to safely and effectively treat individuals with systemic diseases that can jeopardize their health from a biological and pharmacological standpoint [1]. The strengthening of dentists' technical qualifications at the expense of shortcomings in dental medical training has led to recurrent concerns about the European educational models [2]. Authors have also indicated that family physician training regarding oral diseases is highly limited, and it has been suggested that family physicians should incorporate advice on diet, oral hygiene, smoking cessation, fluoridation and screening for dental diseases among their routine health promotion activities [3]. Although these initiatives should always be well received, they are complementary to the much broader competencies of a dentist. A classic example of the distance separating physicians from dentists is pain in the orofacial area, which should be the object of continuous interprofessional consultations, given that some neurological conditions can start with dental pain [4]. In contrast, some dental lesions can simulate neurological diseases, especially those in the trigeminal area [5].

In recent decades, the connection between dentistry and medicine has been regained. Whereas previously we had a classical unidirectional notion of periodontal manifestations of systemic diseases [6], it is now established that individuals with periodontitis are at increased risk of future cardiovascular events, poorer metabolic control of diabetes and more frequent adverse results of pregnancy [7].

Although physicians recognize their scarce training in oral health, they continue to be reluctant to refer their patients to dentists [8]. This situation can be especially relevant in the setting of oral cancer, in which primary care physicians recognize their deficiencies in the tasks of cancer screening and assessing high-risk patients, which hinder early detection [9]. To facilitate the early diagnosis of oral cancer, the National Institute for Health and Care Excellence of the United Kingdom has proposed that all patients with suspicious lesions detected by general practitioners should be referred to a dentist for assessment before being reviewed by a specialist [10]; however the efficacy of this proposal has thus far not been demonstrated [11].

In this letter, we describe a clinical case of an oral lesion suspected to be cancer that led to a considerable cost in human and material resources for the health system and that exacted an emotional toll on the patient and his family. This case requires a reconsideration of the dentist's role in primary care centers.

A 78-year-old man visited the dentist for an ulcer that had appeared a month earlier, located on the lateral edge of the tongue, which had caused the patient discomfort, especially when talking and eating (Fig. 1A). The patient's medical history included a cerebral infarction of cardioembolic origin, atrial fibrillation and arterial hypertension. Accordingly, the patient was undergoing drug therapy with apixaban, atorvastatin, enalapril maleate and bisoprolol.

The ulcer had benign characteristics and had a presumably traumatic origin, given that it was related to an edge of dental calculus attached to the lingual surface of the mandibular right second molar. The dentist removed the calculus with a dental scaler, prescribed a chlorhexidine mouthwash and made an appointment with the patient to check the progress of the lesion in 10 days.

However, encouraged by his closest relatives, who expressed a generalized feeling of cancerphobia, the patient visited his family physician only 2 days after the removal of the calculus. The physician, rather than reassuring the patient and discussing the case with the dentist, launched an urgent referral protocol for suspected oral cancer. The patient was therefore admitted to a hospital otorhinolaryngology department 48 h later, where the patient underwent an excisional biopsy, which was processed urgently. Two days later, the patient returned to the dentist because the lesion had significantly worsened in appearance due to dehiscence of the suture and the formation of a significant clot (secondary to the administration of apixaban) (Fig. 1B). The histopathological study of the lesion confirmed a benign pattern of inflammatory characteristics, and the ulcer resolved spontaneously in a few weeks with *restitutio ad integrum* of the lingual epithelium (Fig. 1C).

In addition to the variables inherent in the various national health systems, the signs, symptoms and location of oral cancer lesions determine the patient's selection of the health care practitioner (physician or dentist) they should visit for the diagnosis and treatment of their problem [12]. The elderly, in particular, visit physicians more regularly than they do dentists and very rarely use dental services [13]. A population study on oral cancer in advanced stages showed that 2 of every 3 cases had been referred by a family doctor and that regular visits to the dentist were a protective factor [14]. One of the study's conclusions was that better training and the implementation of opportunistic examinations of the oral cavity by family physicians could reduce the prevalence of this disease [14].

It has been suggested that oral disease should be included in the training of primary care physicians [15]. In recent years, oral health assessments have been incorporated into the curriculum of residence programs for family physicians in the US; however, their directors' degree of satisfaction is low, mainly due to the lack of time dedicated to this topic and the lack of expert professors [16]. At the postgraduate level, a number of initiatives have been described to promote the interprofessional relationship between dentists and nondentist healthcare practitioners (mainly physicians). Although isolated improvements have been reported in health care practice in terms of oral–systemic health immediately after completing educational interventions, their effect does not last [17]. Various models have been proposed to integrate oral health care into primary care, including self-sufficiency for family doctors with specific training, the presence of a dental hygienist and a direct collaboration pathway with colleagues in dental clinics [18]. This clinical case illustrates a proposal that has been applied in numerous European countries: that in-person integration of dentists

https://doi.org/10.1016/j.oraloncology.2019.05.008
Received 26 April 2019; Received in revised form 6 May 2019; Accepted 9 May 2019
Available online 14 May 2019
1368-8375/

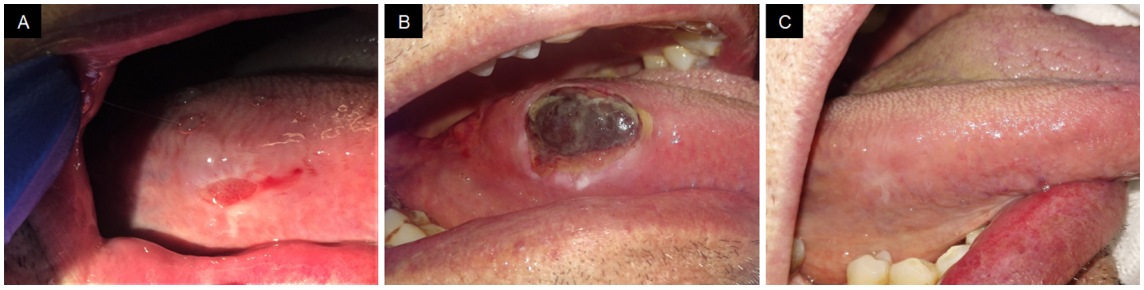

Fig. 1. (A) Lingual ulcer of benign characteristics (suggestive of traumatic origin). (B) Appearance of the lesion 2 days after performing the biopsy (formation of a considerable clot and dehiscence of the suture). (C) Appearance of the mucosa 1 month later (*restitutio ad integrum*).

into the health care team is essential for definitively integrating oral health among the primary care objectives.

Declaration of Competing Interest

The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

References

[1] Gambhir RS. Primary care in dentistry – an untapped potential. J Family Med Prim Care 2015;4:13–8.
[2] Seoane J, Diz-Dios P, Martinez-Insua A, Varela-Centelles P, Nash DA. Stomatology and odontology: perspectives of Spanish professors and senior lecturers in dentistry. Eur J Dent Educ 2008;12:219–24.
[3] Stephens MB, Wiedemer JP, Kushner GM. Dental problems in primary care. Am Fam Physician 2018;98:654–60.
[4] Noma N, Hayashi M, Kitahara I, et al. Painful trigeminal neuropathy attributed to a space-occupying lesion presenting as a toothache: a report of 4 cases. J Endod 2017;43:1201–6.
[5] Noma N, Shimizu K, Watanabe K, Young A, Imamura Y, Khan J. Cracked tooth syndrome mimicking trigeminal autonomic cephalalgia: a report of four cases. Quintessence Int 2017;48:329–37.
[6] Kane SF. The effects of oral health on systemic health. Gen Dent 2017;65:30–4.
[7] D'Aiuto F, Graziani F, Tetè S, Gabriele M, Tonetti MS. Periodontitis: from local infection to systemic diseases. Int J Immunopathol Pharmacol 2005;18:1–11.
[8] Shimpi N, Schroeder D, Kilsdonk J, et al. Medical providers' oral health knowledgeability, attitudes, and practice behaviors: an opportunity for interprofessional collaboration. J Evid Based Dent Pract 2016;16:19–29.
[9] Shimpi N, Bharatkumar A, Jethwani M, et al. Knowledgeability, attitude and behavior of primary care providers towards oral cancer: a pilot study. J Cancer Educ 2018;33:359–64.
[10] NICE. National Institute for Health and Care Excellence. Suspected cancer: recognition and referral. London: HMSO; 2015. Available from URL: < nice.org.uk/guidance/ng12 > . Accessed March 2019.
[11] Grafton-Clarke C, Chen KW, Wilcock J. Diagnosis and referral delays in primary care for oral squamous cell cancer: a systematic review. Br J Gen Pract 2019;69:e112–26.
[12] de Faria PR, Cardoso SV, de A Nishioka S, Silva SJ, Loyola AM. Clinical presentation of patients with oral squamous cell carcinoma when first seen by dentists or physicians in a teaching hospital in Brazil. Clin Oral Investig 2003;7:46–51.
[13] Rubright WC, Hoffman HT, Lynch CF, et al. Risk factors for advanced-stage oral cavity cancer. Arch Otolaryngol Head Neck Surg 1996;122:621–6.
[14] Groome PA, Rohland SL, Hall SF, Irish J, Mackillop WJ, O'Sullivan B. A population-based study of factors associated with early versus late stage oral cavity cancer diagnoses. Oral Oncol 2011;47:642–7.
[15] Lockhart PB, Mason DK, Konen JC, Kent ML, Gibson J. Prevalence and nature of orofacial and dental problems in family medicine. Arch Fam Med 2000;9:1009–12.
[16] Silk H, King R, Bennett IM, Chessman AW, Savageau JA. Assessing oral health curriculum in US family medicine residency programs: a CERA study. Fam Med 2012;44:719–22.
[17] Mowat S, Hein C, Walsh T, MacDonald L, Grymonpre R, Sisler J. Changing health professionals' attitudes and practice behaviors through interprofessional continuing education in oral-systemic health. J Dent Educ 2017;81:1421–9.
[18] Maxey HL, Norwood CW, Weaver DL. Primary care physician roles in health centers with oral health care units. J Am Board Fam Med 2017;30:491–504.

Javier Fernández-Feijoo, Marta Fernández-Varela, Márcio Diniz-Freitas*, Pedro Diz-Dios, Jacobo Limeres-Posse
Medical-Surgical Dentistry Research Group (OMEQUI), Health Research Institute of Santiago de Compostela (IDIS), University of Santiago de Compostela (USC), Santiago de Compostela, Spain
E-mail address: marcio.diniz@usc.es (M. Diniz-Freitas).

* Corresponding author at: Facultad de Odontología, Calle entrerríos s/n, 15782-Santiago de Compostela, Spain.