

**CONTACT** Luísa Zagalo  analuisazagalo@gmail.com

## References

- [1] Noonan B. Understanding the reasons why patients delay seeking treatment for oral cancer symptoms from a primary health care professional: an integrative literature review. *Eur J Oncol Nursing*. 2014;18(1):118–124.
- [2] Omar E. Current concepts and future of noninvasive procedures for diagnosing oral squamous cell carcinoma – a systematic review. *Head Face Med*. 2015;11(1):6.
- [3] Seoane J, Novoa PA. Early oral cancer diagnosis: the Aarhus statement perspective. A systematic review & meta-analysis. *Head Neck*. 2015;(Suppl 1):E2182–E2189.
- [4] Krishnatreya M, Nandy P, Rahman T, et al. Characteristics of oral tongue and base of the tongue cancer: a hospital cancer registry based analysis. *Asian Pac J Cancer Prev*. 2015;16:1371–1374.

## Contact endoscopy – an adjuvant tool for oral cancer early diagnosis

Alberto Santos<sup>a</sup>, Marta Galrito<sup>b</sup>, Teresa Barona<sup>c</sup>, Jorge Varandas<sup>d</sup>, João Subtil<sup>e</sup>, José Saraiva<sup>f</sup>, Carlos Macor<sup>g</sup> and Francisco Salgado<sup>h,i</sup>

<sup>a</sup>Otolaryngology, Hospital Beatriz Ângelo; Hospital CUF Descobertas; Departamento de Tecidos, Células e Moléculas, Faculdade de Ciências Médicas, Universidade Nova de Lisboa, Lisbon, Portugal; <sup>b</sup>Stomatology, Hospital Santa Maria- Centro Hospitalar Lisboa Norte, Lisbon, Portugal; <sup>c</sup>Biology, Departamento de Tecidos, Células e Moléculas, Faculdade de Ciências Médicas, Universidade Nova de Lisboa, Lisbon, Portugal; <sup>d</sup>Otolaryngology, Hospital Beatriz Ângelo, Lisbon, Portugal; <sup>e</sup>Otolaryngology, Hospital Beatriz Ângelo, Hospital CUF Descobertas, Lisbon, Portugal; <sup>f</sup>Otolaryngology Department Head, Hospital CUF Descobertas, Lisbon, Portugal; <sup>g</sup>Otolaryngology Department Head, Hospital Beatriz Ângelo, Lisbon, Portugal; <sup>h</sup>Stomatology Department Head, Hospital Santa Maria- Centro Hospitalar Lisboa Norte, Lisbon, Portugal; <sup>i</sup>Centro de Investigação Interdisciplinar Egas Moniz, Almada, Portugal

**Introduction:** Potentially malignant oral lesions have a high risk of carcinogenesis. Morbidity after treatment and cancer mortality increases substantially in advanced stage tumors (T3, T4), making early diagnosis highly beneficial. The authors studied the role of contact endoscopy in the diagnosis of oral mucosa malignancy and compare it to conventional biopsy histopathology.

**Materials and methods:** A prospective study of 148 consecutive patients with oral mucosal lesions was carried out. Patients were assessed with contact endoscopy in outpatient environment during routine procedures. Results were compared to histopathology biopsy. The informed consent of the subjects and acceptance of the study protocol by a local ethics committee has been obtained.

**Results:** Contact endoscopy revealed a sensitivity of 0.961 (CI 95% –0.811 to –0.993); specificity 0.972 (CI 95% –0.922 to –0.990); predictive positive value 0.892 (CI 95% –0.728 to –0.962); negative predictive value 0.990 (CI 95% –0.949 to –0.998); positive likelihood ratio 38.02; negative likelihood ratio 0.03; accuracy of 0.970 (CI 95%: 0.926 to 0.988); kappa index 0.908 ( $p < .001$ ).

**Discussion and conclusions:** There were three false negative results in our study. Two of them proved to be, in fact, malignancies after total surgical excision. In these cases, contact endoscopy proved to be superior to conventional biopsy in diagnosing oral cancer. The third case was a non-epithelial submucosal cancer which could not be identified by a surface technique as contact endoscopy. Although some false positive results may occur, combining clinical assessment and contact endoscopy observation can reduce undiagnosed early stage tumors. This study proves that contact endoscopy is a useful diagnostic tool to identify early oral mucosal malignancy.

**CONTACT** Marta Galrito  mgalrito@yahoo.com

## Implications of Parkinson disease in oral health

Alexandra Nogueira<sup>a</sup>, Véronique Ferret-Sena<sup>a,b</sup>, José João Mendes<sup>a,b</sup> and Catarina Godinho<sup>a,b,c</sup>

<sup>a</sup>Instituto Superior de Ciências da Saúde Egas Moniz (ISCSEM), Cooperativa de Ensino Superior, C.R.L., Campus Universitário, Quinta da Granja, Caparica, Portugal; <sup>b</sup>Centro de Investigação Interdisciplinar Egas Moniz (CiiEM), Egas Moniz Cooperativa de Ensino Superior, C.R.L., Quinta da Granja, Caparica, Portugal; <sup>c</sup>Clinica Universitária de Neurologia, Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal

**Introduction:** Parkinson's disease (PD), described for the first time 200 years ago, is the second most prevalent neurodegenerative disorder [1] and is increasing in developed and developing countries due to the increase of life expectancy.

This disease is characterized essentially by motor function disorders, such as resting tremor, muscular rigidity, bradykinesia and postural instability and has implications for performing daily life activities, namely, in oral hygiene [2]. Parkinson patients have dysphagia, sialorrhea, xerostomia, burning mouth syndrome, olfactory dysfunction and difficulty in using and adapting to dental prosthesis worsen by cognitive impairment and dementia. In order to treat them properly, the dentist should have the knowledge and competence to identify all signs and symptoms that these patients can develop in their oral cavity and be aware of the adverse effects of the medicines used for the treatment of the disease. The main objective of this study was to integrate and summarize the implications of Parkinson disease in oral health.

**Material and methods:** Concerning the collection of data for this review, the PubMed database of the U.S. National Library of Medicine was used as the main electronic database. A systematic search of articles published up until May 2016 was performed for the subjects "Parkinson's Disease" AND "Oral health". Publications written in Portuguese, English or Spanish were included and Mendeley software was used for electronic title management. Seventy-three documents were carefully evaluated and the most important findings related to the oral health alterations in PD are summarized below.

**Results:** About 9–77% of PD patients have dysphagia [2] which can result in 32–74% of PD patients [3] having sialorrhea due to an incapacity to maintain a closed mouth because of muscle hypotonia and oesophageal reflux enhancing dental erosion and angular cheilitis [4]. However xerostomia (dry mouth) is also frequent in PD patients, and facilitate dental caries, periodontal disease and oral discomfort [4]. The burning sensation is five times more prevalent in PD patients and is related to pharmacological treatment (levodopa). Others factors for bad oral hygiene is a loss of manual dexterity and cognitive dysfunction.

**Conclusion:** The collaboration between the dentist and the caregiver (formal and/or non-formal) and his experience and skills is essential to obtain a cared supervision in oral and personal hygiene during the course of the disease and improve the patient's quality of life. It would be interesting to evaluate the effect of an early accompaniment and its consequences on the oral complications of these patients but for this, health professionals must be informed about the multiple alterations in oral health revised in this study.

**CONTACT** Veronique Ferret-Sena  versena@egasmoniz.edu.pt

## References

- [1] Lang AE. Parkinson's disease at 200 years: progress, new faces, and unmet needs. *UTMJ*. 2016;93(2):6–8.
- [2] Barbe AG, Bock N, Derman SHM, et al. Self-assessment of oral health, dental health care and oral health-related quality of life among Parkinson's disease patients. *The Gerodontology Association*; 2016. doi.org/10.1111/ger.12237
- [3] Ou R, Guo X, Wei Q, et al. Diurnal drooling in Chinese patients with Parkinson's disease. *J Neurol Sci*. 2015;353(1–2):74–78.
- [4] DeBowes S, Tolle, S, Bruhn A. Parkinson's disease: considerations for dental hygienists. *Int J Dent Hyg*. 2013;11:15–21.

## Impacted maxillary canine – clinical case

J. Baptista<sup>a</sup>, G. Kizi<sup>a</sup>, V. Alves<sup>a</sup> and A. Delgado<sup>b</sup>

<sup>a</sup>Egas Moniz Orthodontics, Egas Moniz Cooperativa de Ensino Superior, C.R.L., Caparica, Portugal; <sup>b</sup>Orthodontics Department, Egas Moniz Cooperativa de Ensino Superior, C.R.L., Caparica, Portugal

**Introduction:** Apart from third molars, upper canines are the most frequent impacted teeth [1–3]. The aetiological factors are not clearly defined, but it is believed that there is a polygenic and multifactorial cause. They have a key role in dental and facial aesthetic and in a stable and functional occlusion [4]. Given its importance, it emerged over time the need to develop therapeutic techniques to solve this dental inclusion adopting a conservative attitude towards the positioning of the tooth in the arch. Early diagnosis is essential because the younger the patient the higher the success rate [3]. The purpose of this work is to present a clinical case of impacted maxillary canines, whose clinical approach consisted of orthodontic-surgical traction, with a nine months follow-up.

**Materials and methods:** A 13-years-old female patient came to Egas Moniz orthodontic clinic, with the main complaint of having primary teeth that have not fallen yet. After clinical examination, it was observed the presence of primary maxillary canines with no mobility and no exposure of definitive maxillary canines. The radiographic analysis showed palatally impacted canines. After obtained informed consent, the treatment consisted of palatine exposure of canines by a surgical closed technique and its traction using a cantilever, followed by fixed appliance.

**Results:** After performing a surgical closed technique for the impacted teeth exposure, followed by traction with a cantilever and fixed appliance, it was possible to place both canines in the arch.

**Discussion and conclusions:** According to several authors, palatally impactation of upper canines is reported as the most frequent, raging among 83% and 85% [3,4], with a rotation between 60° and 90° of their long axis and with a mesial orientation [5]. The surgical exposure of these cases has been one of the treatments of choice [1] when patient's age does not allow a preventive intervention. It can be performed by a closed or open approach. The surgical close