

## COVID-19 and the risk of delayed diagnosis of oral cancer

Coronavirus disease (COVID-19) is a significant cause of morbidity and mortality, which because of its high infectious potential has changed lifestyles all over the world over the past year. Indirectly, these changes may be related to morbidity and mortality due to inadequate medical care for other diseases, which are apparently unrelated to the virus itself, including late diagnosis of oral cancer. The discussed cases highlight the potential risk of delay in the diagnosis of lesions in the oral cavity.

An 86-year-old man presented at the dental clinic because of a tongue lesion, which was first noticed 3.5 months previously. He did not seek medical attention earlier due to COVID-19-related lockdown, followed by the health authorities' recommendations regarding elderly people, even though he felt the lesion had grown and hardened over time. Medical background included diabetes mellitus and ischemic heart disease. He had a past history of cigarette smoking (40 pack-years) but had quit smoking 20 years previously, when diagnosed with heart disease. The lesion, on the right side of the tongue, included an extensive white flat area, partially speckled, and an elevated ulcerated (pyogenic granuloma-like) area (Fig 1).

The patient was referred for an urgent biopsy and pathologic examination on suspicion of carcinoma. The biopsy was performed the next day; two samples were taken, one from the elevated ulcerated region (anterior), and the other from speckled region (posterior; Fig 1). Microscopic examination showed an invasive squamous cell carcinoma (SCC), with significant atypia and only focal keratinization, which was graded as moderately differentiated. Following work-up, stage 3 (T3N0M0) was established.

Diagnostic delay of oral carcinoma may be related with advanced-stage tumor and poor prognosis.<sup>1</sup> Geographic factors may influence diagnosis and prognosis. For example, travel time is an independent contributor to advanced stage at diagnosis of oral cancer among low-income patients as the adjusted odds ratio of advanced T-stage at diagnosis was 2 for each 1 hour of drive to the medical center.<sup>2</sup>

In the patient presented, the malignancy was diagnosed at advanced stage; although no lymph nodes were involved and no spreading to other parts of the body was detected, the



**Fig 1** Clinical appearance of the right lateral aspect of the patient's tongue. Note the speckled hyperkeratosis and ulceration.

malignancy was staged "3" because the lesion was larger than 4 cm and deeper than 10 mm. The delay in diagnosis resulted from COVID-19-related lockdown and health authorities' recommendations regarding elderly people. This elderly diabetic patient was at risk for life-threatening complication in case of COVID-19 infection, and therefore was restricted to his residence for 3 months.<sup>3</sup> During this time, although aware of the tongue lesion progressing, he had no access to the required examination, diagnosis, or treatment, which most probably gravely affected the stage of the disease and outcome.

In another case treated by one of the authors, a chronic graft versus host disease (cGVHD) patient came for a follow-up appointment with her hematologist. Among other things, post-transplant and cGVHD patients are at high risk for oral and skin cancer.<sup>4</sup> The patient did not remove the face mask for the whole session, in accordance with health authorities' recommendations. Thus, the hematologist did not notice a suspicious lesion on the patient's lower lip. In this case, a delay in diagnosis may similarly be of a prognostic significance.



Early diagnosis of oral cancer is critical since the survival rate is as high as > 90% after early diagnosis and prompt treatment, and as low as < 30% after late diagnosis and treatment.<sup>5</sup> Dental practitioners should be aware of the risk of delay in the diagnosis of lesions in the oral cavity, especially in medically compromised patients who rarely leave the house during this epidemic period. These patients should be advised not to postpone the examination of these lesions. ■

## References

1. Gómez I, Seoane J, Varela-Centelles P, Diz P, Takkouche B. Is diagnostic delay related to advanced-stage oral cancer? A meta-analysis. *Eur J Oral Sci* 2009;117:541–546.
2. Farquhar DR, Masood MM, Lenze NR, et al. Travel time to provider is associated with advanced stage at diagnosis among low income head and neck squamous cell carcinoma patients in North Carolina. *Oral Oncol* 2019;89:115–120.
3. Centers for Disease Control and Prevention. Your health: Quarantine if you might be sick. <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine-isolation.html>. Accessed 23 July 2020.
4. Elad S, Zadik Y, Zeevi I, et al. Oral cancer in patients after hematopoietic stem-cell transplantation: long-term follow-up suggests an increased risk for recurrence. *Transplantation*. 2010;90:1243–1244.
5. Eliav E. Editorial: Oral cancer: Can we do better? *Quintessence Int* 2017;48:91.

### Clariel Ianculovici, DMD

Department of Otolaryngology, Head and Neck Surgery and Maxillofacial Surgery, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

### Ilana Kaplan, DMD

Professor, Institute of Pathology, Tel-Aviv Sourasky Medical Center, and Goldschleger School of Dental Medicine, Tel-Aviv University, Tel-Aviv, Israel

### Shlomi Kleinman, DMD

Department of Otolaryngology, Head and Neck Surgery and Maxillofacial Surgery, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

### Yehuda Zadik, DMD, MHA

Professor, Department of Military Medicine, Faculty of Medicine, Hebrew University of Jerusalem, and Department of Oral Medicine, Sedation and Maxillofacial Imaging, Hebrew University-Hadassah School of Dental Medicine, Jerusalem, Israel. Email: Yehuda.Zadik@mail.huji.ac.il



**Clariel Ianculovici**