Oral diffuse large B-cell lymphoma presenting as a bland nodule

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INTRODUCTION

Diffuse large B-cell lymphoma (DLBCL) is a type of non-Hodgkin lymphoma that may involve the oral cavity and jaw bones.[1] It is an aggressive cancer that accounts for 30% to 35% of adult non-Hodgkin lymphoma cases globally.[2] Less than 5% of oral cancers are primary lymphomas, and only 15% of oral lymphomas are in sites other than Waldeyer's ring or the palate.[3,4] The cause of DLBCL is not fully understood, and most patients do not have underlying risk factors, and the tumors may arise de novo. Less commonly, cases arise from a high-grade transformation of a less aggressive lymphoma or may occur in the setting of an immunodeficiency.[1,5]

DLBCL most commonly affects elderly males, though it may occasionally occur in children and adolescents.[6] The most commonly reported symptoms are pain, numbness, tooth loosening, nasal obstruction and discharge, foreign body sensation in the throat and sore throat, dysphagia, and odynophagia.[5] The risk of developing DLBCL is increased in the setting of immunodeficiency such as in the AIDS stage of HIV.[7] Subclassification of DLBCL enables pathologists to provide insight into the potential behavior and prognosis of these lymphomas, with the germinal center B-cell–like demonstrating better outcomes compared to non-germinal center B-cell–like subtypes.[1,8]

Abbreviation used:

AIDS:	acquired immunodeficiency syndrome
DLBCL:	diffuse large B cell lymphoma
HIV:	human immunodeficiency virus
RCHOP:	rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone

CASE REPORT

This case provides a useful diagnostic framework for someone willing to take steps to evaluate an oral nodule. A man in his 70s presented with right cheek and gum swelling on the "inside and outside." The patient first noticed this approximately 3 months prior to his visit when he was evaluated by his dentist, who prescribed doxycycline. Due to the lack of response from antibiotics and without further workup recommended by dentistry, the patient scheduled a visit with a dermatologist. On review of systems, the patient denied associated symptoms such as dysphagia, bleeding, numbness, or pain. The

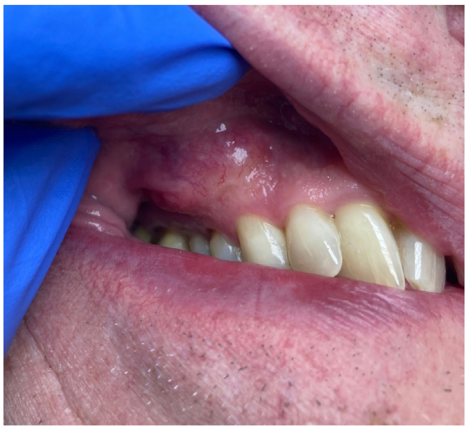

Fig 1. Gingival nodule seen on exam.

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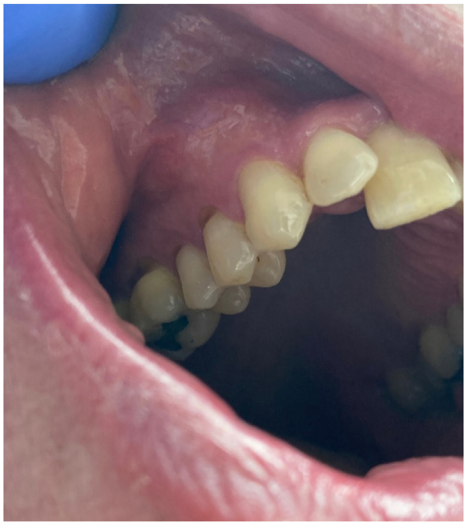

Fig 2. Gingival nodule seen on exam.

patient's history was significant for hyperlipidemia, arrhythmia, throat surgery, 60-pack–year smoking history, and moderate alcohol use. His only medication was atorvastatin. On inspection of the oral cavity, a 2 cm × 1 cm hard, smooth, mucosa-colored nodule was observed on the right upper maxillary gingiva that was also externally deeply palpable. Gingival recession was noted near the nodule, and tissue swelling was noted on the right medial cheek (Figs 1 and 2). Preliminary diagnoses of torus palatinus ex situ or osteoma were made. A facial computed tomography (CT) with contrast was ordered to rule out concerning features and showed a nonspecific 1.2 × 2.1 × 2.5 cm enhancing soft tissue mass approaching the infraorbital foramen. The patient returned to the dermatology clinic and a full thickness punch biopsy was obtained via the

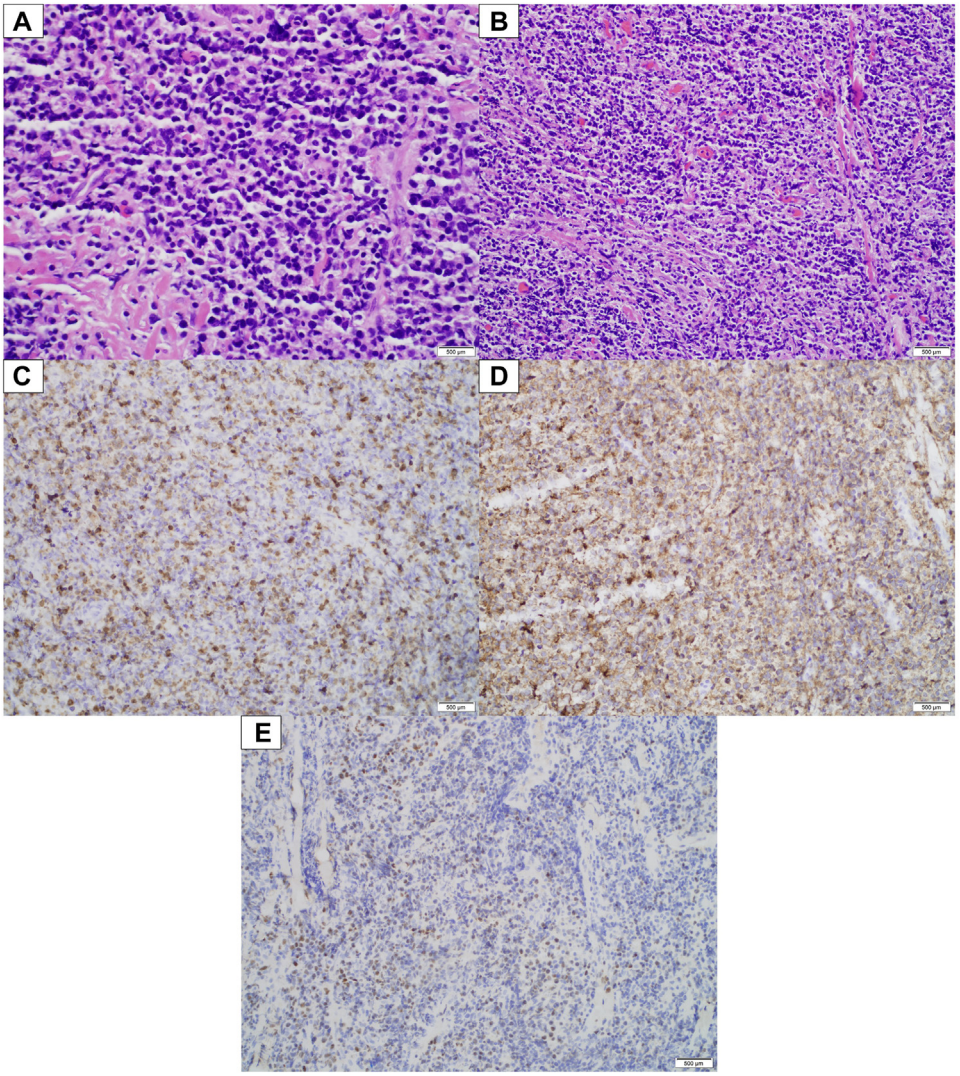

Fig 3. Immunohistochemistry of punch biopsy. **A** and **B,** Hematoxylin-eosin magnification 400× and 200× showing a dense population of lymphocytes with mixtures of (**C**) CD3+ T cells, (**D**) CD20+, and (**E**) PAX-5+ B cells. *CD3*, Cluster of differentiation 3; *CD20*, cluster of differentiation 20; *PAX5*, paired box 5.

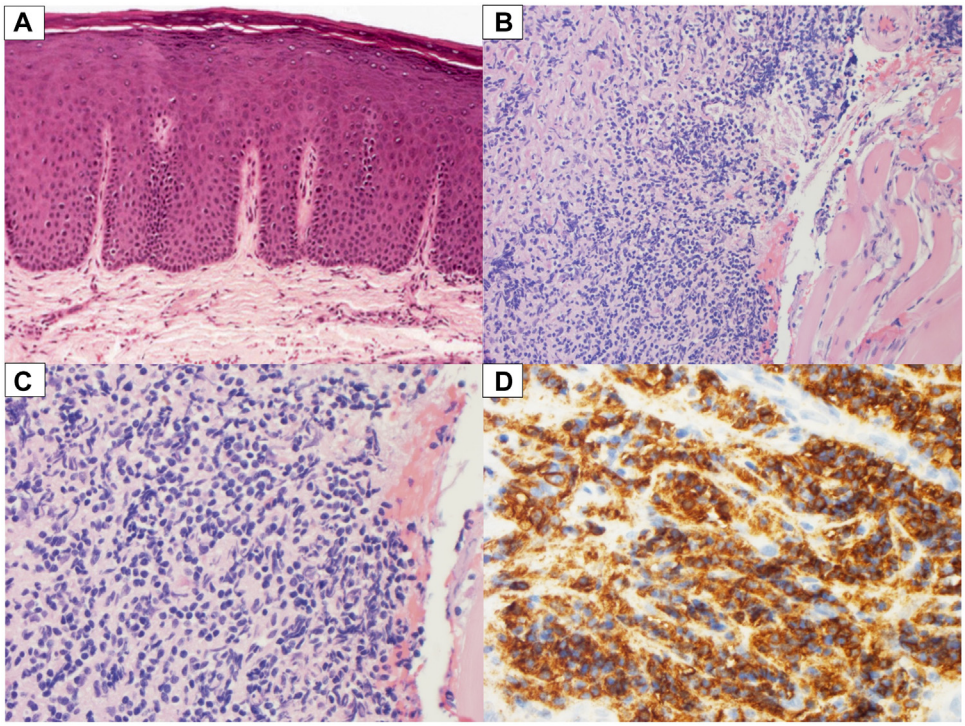

Fig 4. Immunohistochemistry of excisional biopsy. **A,** Normal buccal mucosa hematoxylin-eosin (credit basicmedicalkey.com). **B,** Diffuse large B-cell lymphoma hematoxylin-eosin magnification 20×. **C,** Diffuse large B-cell lymphoma hematoxylin-eosin magnification 40×. **D,** CD20 stain.

gingival approach through the center of the nodule. The initial punch biopsy was sent to dermatopathology for examination and revealed an atypical lymphocytic infiltrate containing mixtures of B cells and T cells that was suspicious for but not diagnostic for DLBLC (Fig 3). The patient was then referred to otorhinolaryngology for larger and deeper incisional biopsy wherein immunostaining revealed diffuse large B cells, cluster of differentiation 10 (CD10)+, B cell lymphoma 6 (BCL6)+, and multiple myeloma 1 (MUM1), consistent with DLBCL.[9] (Fig 4) After 3 cycles of rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone (RCHOP), a positron emission tomography (PET) scan revealed complete remission. Consolidative radiation was conducted successfully.

DISCUSSION

A diagnosis of DLBCL requires tissue biopsy findings of large B cells with nuclei at least twice the size of a small lymphocyte. Early biopsy performed by the dermatologist allows for faster diagnosis; however, occasionally even a full thickness punch biopsy will not provide a definitive diagnosis of a lymphoma such as DLBCL but may suggest the need for further tissue sampling. In these cases, it is imperative to recognize when further clinicopathological correlation is required and obtain additional samples until diagnostic certainty is achieved. Survival in non-Hodgkin lymphoma cancers continues to improve due to early detection and improved therapy.[10] Common presentations of edema and pain may cause DLBCL to be mistakenly treated as periodontal diseases, thus delaying lymphoma treatment and worsening prognosis.[6] This vignette aims to remind dermatologists to examine the oral cavity with skin examinations. The dermatologist often plays a critical role in early identification of dangerous cutaneous malignancies that are otherwise dismissed as benign. We have the experience and the opportunity to recognize abnormal skin and mucous membrane findings better than perhaps any other group, and we should play an equivalent role in identifying and sampling oral malignancies early to improve patient outcomes—if not us, then who?

Conflicts of interest

None disclosed.

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