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Upper Airway Manifestations of Mycosis Fungoides: A Case Report Series

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Introduction

Cutaneous T-cell lymphoma (CTCL) is a group of non-Hodgkin's lymphomas marked by infiltration of malignant T-lymphocytes into skin. Mycosis fungoides (MF) is the most common subtype of CTCL, presenting with erythematous patches, plaques, and tumors. While MF typically exhibits cutaneous symptoms, it is important for clinicians to recognize the potential for disease progression to visceral organs, especially in advanced stages. In advanced MF, visceral spread most commonly occurs to the lymph nodes, spleen, lungs, and liver [1]. However, there have also been reported cases of upper airway spread, including laryngeal [2] and oral mucous membrane involvement [3, 4]. Large-cell transformation (LCT) can occur in 20-50% of advanced disease. LCT is characterized by large cells dominating >25% of the lesion infiltrate on biopsy or presence of large cell microscopic nodules, and it is a marker of poor prognosis [5]. Given the aggressive growth pattern of LCT and its potential for non-nodal disease spread, it is important that clinicians consider the possibility of upper airway involvement in patients with advanced MF. In this case series, we present three instances of advanced MF with LCT affecting the tongue, oral mucosa, and epiglottis.

Case series

A 65-year-old man with remote history of MF presented to clinic with progressively worsening skin lesions. On physical exam, notable findings included scattered plaques and erythematous patches, involving 15% of the patient's body surface area. Restaging diagnostics rendered a designation of Stage IB CTCL (T2N1M0B1b). He was started on a treatment regimen of narrow-band UVB phototherapy (NB-UVB) three times per week. The patient returned to clinic weeks later with multiple painful tumors and eroding plaques located on the tongue. Biopsy of the tongue was performed, and MF with CD30+ large cell transformation was diagnosed. The patient was treated with 3 cycles of IV brentuximab vedotin (1.8mg/kg IV Q 21 days), achieving complete resolution of oral lesions and partial response in cutaneous lesions with 60% clinical improvement.

A 52-year-old woman with Stage 1B CTCL(T1bN0M0B1a) treated with NB-UVB twice weekly presented with new painful oral lesions. On physical exam, eroded plaques on the hard palate and gingiva were noted and biopsied. Pathology of the hard palate lesion revealed CD30+ large cell transformed MF. A PET-CT showed right lower jugular nodes greater than five cm with a standard uptake value of 6.7. The patient was treated with IV brentuximab vedotin (1.8 mg/kg IV Q 21 days) which resulted in clearance of oral and cutaneous lesions over four cycles.

A 68-year-old woman with Stage IVA2(T3N3M0B1a) MF presented to multidisciplinary clinic with acute dysphagia. Initially diagnosed at Stage IB, her disease progressed to bulky nodal involvement, including biopsies revealing CD30+ large cell transformation. She was unable to tolerate systemic therapy with brentuximab, gemcitabine, and pralatrexate, experiencing infusion reactions and hypersensitivity. She was treated with pembrolizumab 400mg IV q 6 weeks in combination with local electron beam radiation with excellent control of nodal disease and focal tumors. Five months after beginning pembrolizumab, the patient developed sudden onset dysphagia unimproved by antibiotics. CT scan revealed a supraglottic mass with complete airway effacement, and a scope confirmed an ulcerated mass. Tumor biopsy revealed atypical CD4+ lymphocytes consistent with MF in the epiglottis. She received oral prednisone for airway protection and targeted radiation therapy, resulting in rapid improvement and resolution of dysphagia.

Discussion

Treatment of advanced MF with LCT should be individualized, considering specific patient and tumor factors. Due to its aggressive nature and poor prognosis, MF with LCT typically requires systemic treatment. Conventional therapies for advanced disease include targeted systemic treatments, chemotherapy and radiation.3 Monoclonal antibodies have become increasingly common in the treatment of MF [5]. Among these, brentuximab vedotin (anti-CD30 antibody-drug conjugate) has shown an overall response rate >60% and efficacy in tumors and large cell transformed disease [6]. The first two cases in this series successfully utilized brentuximab vedotin to manage CD30+ large cell transformed MF oral cavity tumors. In the third case of epiglottic MF, the patient could not tolerate brentuximab vedotin, and radiation therapy was successfully utilized.

Oral and upper airway involvement in MF is uncommon and often associated with advanced-stage disease and poor prognosis. Radiation therapy has traditionally been the primary treatment for oral LCT-MF despite associated side effects including osteoradionecrosis, xerostomia, and mucositis [3]. Goggins et al. (2023) described a case of oral mucosal involvement in CD30+ LCT-MF similar to those described in this series. A complete clinical response was achieved after only two doses of brentuximab vedotin, with limited side effects, supporting targeted immunotherapy use in select patients.

Similarly, there are a few documented reports of laryngeal involvement in MF. Bauman et al. [2] described a case of a patient with known MF who presented with hoarseness, which was confirmed by biopsy to be due to infiltration of the false vocal cord. Despite systemic treatment with doxorubicin resulting in initial symptomatic relief, her condition deteriorated due to bone marrow involvement, and she died within a few months of symptom onset. Kuhn et al. [7] reported two additional cases of laryngeal MF, both presenting with voice changes and upper airway dysfunction in the setting of advanced, disseminated disease. In such cases, local interventions such as radiation therapy or tracheostomy may be required to manage airway compromise in addition to systemic treatment for overall disease control.

This case series documents the potential for upper airway involvement in advanced mycosis fungoides, especially in large cell transformed disease. Our findings add to the limited literature by demonstrating that brentuximab vedotin is effective in treating oral CD30+ LCT-MF, while radiotherapy remains an option when systemic therapy alone is not sufficient or when there is a need for local symptom relief. Clinicians should be aware of this rare MF manifestation in patients presenting with oral lesions or dysphagia and its successful treatment with brentuximab vedotin.

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Conflicts of interest: No conflicts to disclose.

References

1. Burg G. (2015). Systemic involvement in mycosis fungoides. *Clin Dermatol. 33*(5):563–571. https://doi.org/10.1016/j.clindermatol.2015.05.008
2. Bauman, T. M., Wichterman, C. M., Musiek, A. C., et al. (2017). Hoarseness as a presentation of mycosis fungoides infiltrating the larynx Case Reports: bcr-2017-221531.
3. Goggins, C. A., Gocke, M. T., Jang, S., DeSimone, J. A. (2019). Oral mycosis fungoides with CD30+ large cell transformation successfully treated with brentuximab vedotin. *JAAD Case Rep. 5*(2):180–183. https://doi.org/10.1016/j.jdcr.2018.11.013
4. de la Fuente, E. G., Rodriguez-Peralto, J. L., Ortiz, P. L., et al. (2000). Oral involvement in mycosis fungoides: Report of two cases and a literature review. *Acta Derm Venereol. 80*(4):299–301. https://doi.org/10.1080/000155500750012234
5. Hayashi, S., Tokoro, S., Igawa, K. (2023). Brentuximab vedotin treatment for mycosis fungoides with CD30+ large-cell transformation in the early stage. *J Cutan Immunol Allergy. 6*:260–261. https://doi.org/10.1002/cia2.12330
6. Papadavid, E., Kapniari, E., Pappa, V., et al. (2021). Multicentric EORTC retrospective study shows efficacy of brentuximab vedotin in patients who have mycosis fungoides and Sézary syndrome with variable CD30 positivity. *Br J Dermatol. 185*(5):1035–1044. https://doi.org/10.1111/bjd.20588
7. Kuhn, J. J., Wenig, B. M., Clark, D. A. (1992). Mycosis fungoides of the larynx. Report of two cases and review of the literature. *Arch Otolaryngol Head Neck Surg. 118*(8):853-8. doi: 10.1001/archotol.1992.01880080075016. PMID: 1642838.

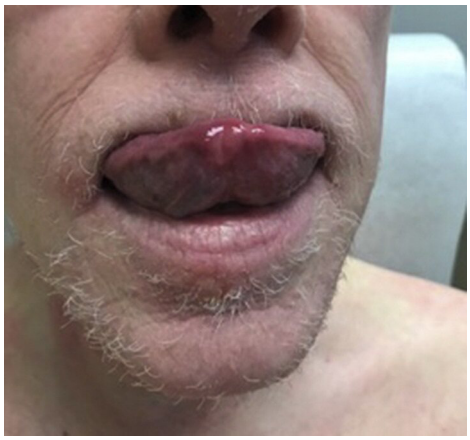

Figure 1: Axial CT demonstrating a well-defined supraglottic mass (yellow marker), revealed to be epiglottic involvement of MF.

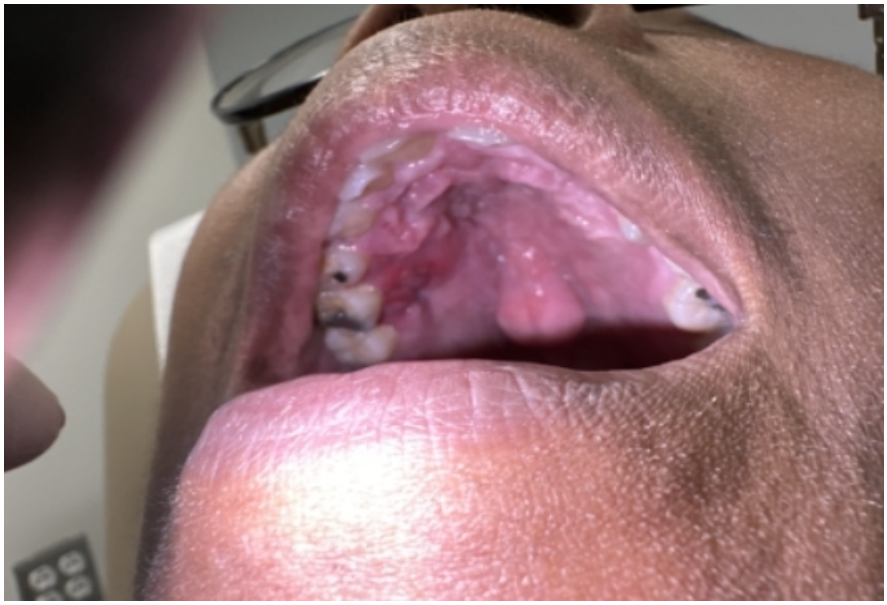

Figure 2: Clinical image of lesion on the tongue demonstrating atypical mucosal involvement of MF

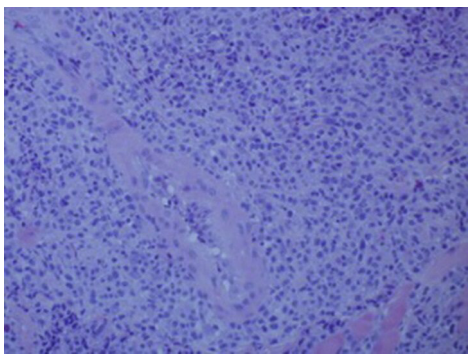

Figure 3: CD30 Immunohistochemistry of tongue lesion consistent with MF with large cell transformation