High-grade lymphoma mimicking advanced nasopharyngeal carcinoma
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OBJECTIVES
• To develop a management approach to a rapidly progressive skull base mass with cervical metastases allowing timely and proper diagnosis of the less common high-grade lymphoma.
• To review the differential diagnosis of an aggressive nasopharyngeal mass eroding the central skull base presenting with extensive neck metastases and neurologic symptoms.

INTRODUCTION
Although relatively uncommon, the nasopharyngeal mass requires a thorough evaluation. In an adult, the differential diagnosis is broad. Expeditious and accurate diagnostic studies and tissue diagnosis can have critical prognostic implications.

We present the case of a man with high-grade lymphoma mimicking advanced nasopharyngeal carcinoma. The presentation, diagnosis and management of diffuse large B-cell lymphoma (DLBCL) in the head and neck are reviewed along with recent literature pertaining to the diagnosis and treatment of this aggressive lymphoma.

CASE REPORT
A 58 year old male presented with a 4-5 week history of an expanding left neck mass. His past medical history was notable for excision of a cutaneous squamous cell carcinoma on the right forehead (15 years ago) and tonsillectomy. He was a lifetime non-smoker and non-drinker. His initial symptoms were left-sided otalgia, headache and sore throat and he was treated for presumed TMJ by his PCP. His symptoms progressed to hoarseness, a dry cough and left-sided facial numbness in the setting of a rapidly expanding left neck mass. A CT was obtained that demonstrated a 4.3 cm by 3.4 cm neck mass.

He developed left eye ptosis and diplopia. A left neck FNA was nondiagnostic and a bone marrow biopsy and lumbar puncture showed no evidence of malignancy. PET scan revealed multiple foci of intense tracer uptake in the left neck, oropharynx, liver, spleen, superior and anterior mediastinum, retroperitoneum, sternum, left femur, right iliac bone, sacrum and right inferior pubic ramus.

He then presented to our institution. Repeat imaging demonstrated a left nasopharyngeal mass with extensive involvement of the sphenoid sinus, clivus, skull base and cavernous sinus. A CT scan in addition to a PET scan should be obtained to aid in staging and prognosis.

Immunohistological staining is typically positive for CD 19, CD 20, CD 22, CD 45, and CD 79a, but negative for CD 3 and CD 5. Molecular rearrangements involving bcl-2 and bcl-6 are often seen in DLBCL. Analysis of gene expression profiles has enabled the identification of two molecularly distinct forms of DLBCL: germinal center B-cell-like DLBCL, associated with significantly higher survival and activated B cell-like DLBCL (ABC-like). A less studied third subgroup, Type III, serves to unify cases that do not express genes characteristic of either of the two more studied groups.

Unintreated, diffuse B-cell lymphoma is rapidly fatal (on the order of months) because of its aggressive progression. Surgical biopsy is imperative for diagnosis and is favored over fine-needle aspiration or large bore-needle biopsies because of the quantity of tissue needed for adequate tissue acquisition. Tissue should be sent fresh (Figure 2).

Although FNA of a cervical metastasis or open neck biopsy provides excellent access to the primary lesion for safe and effective biopsy and diagnosis, a rapid clinical course with progressive cranial neuropathies should raise the consideration of a high-grade lymphoma. Work-up must include timely and adequate tissue acquisition. Tissue should be sent fresh to pathology for appropriate typing.

• Although FNA of a cervical metastasis or open neck biopsy can be helpful, endoscopic transnasal biopsy provides excellent access to the primary lesion for safe and effective biopsy and diagnosis.

DISCUSSION
Nasopharyngeal carcinoma represents the most common malignancy of the nasopharynx and central skull base, but the differential diagnosis of a nasopharyngeal mass should be broad. Diffuse large B-cell lymphoma (DLBCL) is the most common type of lymphoma, accounting for 30-40% of the 55,000 new cases of adult NHL diagnosed each year.

Common head and neck sites of DLBCL include: Waldeyer’s ring, the nasal cavity, the paranasal sinuses, the thyroid and salivary glands, and the orbit while bone marrow involvement is a late finding. Typically lymphoma presents as a rapidly enlarging symptomatic mass at a single lymph node, however 10% of patients with NHL present with extranodal disease in the head and neck region. Lymphoma therefore must be considered in cases of extranodal or extralymphatic disease, even in the absence of nodal disease. In all, there are fewer than 30 reported cases of lymphoma presenting with isolated diffuse infiltration of the skull base.

The peak incidence of DLBCL is in the seventh decade of life, but the process can occur at any age. Currently, there exists no effective screening modalities and patients are diagnosed only after they present with associated symptoms, such as lymphadenopathy. A CT scan in addition to a PET scan should be obtained to aid in staging and prognosis.

Radiation therapy is adjunctive in cases of limited-stage disease. Prompt diagnosis and initiation of treatment often can reverse the cranial nerve palsies associated with primary lymphoma of the skull base and can be life saving.

This case demonstrates the importance a broad differential diagnosis and thorough evaluation of the nasopharyngeal mass. Expedient and accurate tissue diagnosis of a mass mimicking advanced nasopharyngeal carcinoma can be achieved safely in a minimally invasive endoscopic manner, as shown by this case.

REFERENCES