Lymphoid Hyperplasia Masquerading as a Large Paraganglioma

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OBJECTIVES
1) To describe a case of lymphoid hyperplasia (LH) with unusual clinical and radiographic presentation as a somatostatin-positive mass in the post-styloid parapharyngeal space (PPS).
2) To review the literature, which does not report a case of LH in the PPS being somatostatin-positive or resulting in cranial neuropathy.

METHODS
The clinical presentation, imaging features, surgical findings and pathology slides were reviewed in the case of an adult patient with a PPS mass. The literature on lymphoproliferative disease was reviewed as was that on somatostatin-positive PPS lesions. Permission was obtained from the patient to publish the findings.

RESULTS
A 51-year old male with 3 months of otalgia, hearing loss, and tinnitus underwent audiogram, revealing asymmetric hearing loss. Laryngoscopy showed a paretic true vocal cord. MRI showed a 4.5 cm post-styloid PPS mass displacing the carotid artery anterolaterally. Octreoscan scan showed significant somatostatin uptake in the PPS mass, suggestive of a glomus tumor (Figure 1). No uptake was noted elsewhere. Angiogram showed prominent vascular blush and feeders from the occipital artery. The patient underwent preoperative embolization of arterial feeders to the mass. A transcervical approach was used to access the mass. The digastic muscle and stylohyoid muscles were transected. A solid, tan mass was noted posteromedially to the bifurcation of the carotid artery and did not appear to be in continuity with the carotid artery or with the internal jugular vein. The marginal mandibular nerve, hypoglossal nerve, and superior laryngeal nerve were visualized and preserved. The external carotid artery and its distal branches (including the internal maxillary and superficial temporal arteries) were ligated to facilitate access to the internal carotid artery and the mass (Figure 4). Proximal and distal control of the common carotid artery and internal carotid artery was achieved. The mass was removed in bloc with no tumor spillage. A Jackson Pratt drain was placed and the neck incision was closed in standard fashion. The patient had been consented for possible mandibulotomy, lip split, and tracheostomy, which were not ultimately required.

The patient was admitted to the intensive care unit. He was discharged home on postoperative day 3. He was cleared for oral feeds by a Speech and Swallowing Therapist. He was hemodynamically stable throughout his hospitalization. His left true vocal cord paresis was stable from his preoperative state and his voice was strong.

DISCUSSION
The early presentation of paragangliomas can often be subtle, making the diagnosis challenging. Symptoms can include pulsatile tinnitus, hoarseness, and new onset neck mass usually at the carotid bifurcation or higher in the neck. Although paragangliomas are most commonly slow growing and benign in nature, they can present with local bone invasion and cranial neuropathy, which makes early diagnosis important in the prevention of significant sequelae.

While CT, MRI, and angiography have long been the principal imaging modalities for paragangliomas, they are often inadequate in distinguishing paragangliomas from other masses. In 2000, Telsch et al demonstrated the utility of Octreotide scans in the preoperative evaluation of patients with suspected head and neck paragangliomas. Octreotide is a Somatostatin analog with a high affinity for somatostatin type 2 (S2) receptors normally present in the hypothalamus, cerebral cortex, brainstem, kidney, and pancreas. 98% of Paragangliomas have S2 receptors, ensuring a high likelihood of octreotide binding in paragangliomas.

This case demonstrates that post-styloid parapharyngeal masses in the medial portion of the PPS may actually be lateral retropharyngeal nodes. Paragangliomas may also grow medially and present atypically and may be associated with vocal cord paralysis. This case is particularly unusual in that octreotide-positive LH has never been reported.

REFERENCES
Available on request