The prevertebral space (PVS) is situated between the prevertebral fascia anteriorly and the vertebral bodies posteriorly and the carotid sheaths laterally. The PVS extends from the skull base down to the level of the coccyx and includes prevertebral muscles and fat. Diseases in the PVS include primary tumors, direct spread of tumors from adjacent spaces, metastasis, congenital/developmental lesions, inflammation, and infection. Given the PVS is intimately associated with the head and neck region in the cervical spine, the Otolaryngologist may very well encounter masses arising from this location in their clinical practice. We present a case of a patient with a prevertebral mass amenable to transoral robotic surgery (TORS) with Otolaryngology.

A 36 year old male first presented to his primary care physician for post-nasal drip and allergy work-up. A mass in his throat was incidentally noted and he was referred to an outside Otolaryngologist for further evaluation. An outside computer tomographic (CT) neck scan with contrast initially showed a 2.5 x 2.2 x 5.3 cm right postero-lateral oropharyngeal mass. MRI neck with contrast showed a 4.2 cm well-circumscribed, homogenously enhancing ovoid mass at the level of C2 separate of the longus colli muscle without obvious invasion of adjacent structures or osseous destruction (Figures 1-3).

The patient had noted increase in snoring for the last three months. Exam revealed a large, smooth mass occupying approximately 50% of the right posterior pharyngeal wall. Surgery was recommended given the increasing mass effect and patient’s history of worsening snoring. The patient was also referred to Orthopedic surgery for discussion of the potential need for cervical spine repair following resection. Given sparing of vertebral cortical bone, it was felt the patient could proceed safely with Otolaryngology for transoral robotic resection of this soft tissue mass without the need for Orthopedic intervention.

The patient underwent transoral robotic resection of the right prevertebral mass using the daVinci Robot (Intuitive Surgical, Inc.). Needle-tip monopolar cautery was used to make a mucosal incision over the right posterior pharyngeal wall. A 30-degree telescope was used for visualization. Dissection was carried out in an extracapsular plane. The tumor spanned the level of C1 to C4 which correlated to the level of the inferior nasopharynx down to the arytenoids. The wound was irrigated with normal saline and the wound was closed primarily using 3-0 Vicryl interrupted horizontal mattress sutures. The daVinci only for the most inferior sutures.

Patient was started on tube feeds via a Dobhoff tube on post-operative day (POD) 1 for five days, after which the Dobhoff was removed and the patient was started on a full liquid diet. He advanced to a regular diet after discharge. Final pathology demonstrated giant cell tumor for which surgery is the primary treatment modality. He was asymptomatic at his 6 month follow-up.

We demonstrate that transoral robotic surgery is a safe and effective method of treatment for selective cervical prevertebral space masses, in particular giant cell tumors.

References

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