LETTER

Horner's syndrome as an unusual complication of retropharyngeal schwannoma excision

Dear Editor

The deep cervical fascia (dCF) divides the central neck compartment into four anatomical planes: prevertebral, dangerous, retropharyngeal, and visceral. The retropharyngeal space (RFS), enveloped between the visceral and alar layers of the dCF, contains fat and Rouviere's lymph node. Although metastatic disease from primary head and neck cancers accounts for most tumor lesions in the RFS, primary tumors, i.e., schwannomas, have also scarcely been reported[1].

A 34-year-old man presented to the ENT outpatient department, complaining of voice change, foreign-body sensation in the throat, and progressive dysphagia of five-year duration. Flexible nasendoscopy revealed bulging of the posterior pharyngeal wall; an urgent head and neck magnetic resonance imaging (MRI) demonstrated a 6 x 4.6 x 3.5 cm well-defined encapsulated mass at the RFS, extending from the level of C1 to C4, pushing the tongue-base and vallecula, and causing significant upper-airway obstruction. There was no infiltration of the pharyngeal wall or prevertebral muscles and no lymph node involvement in the neck.

The patient underwent tracheostomy under local anesthesia; an attempt to remove the lesion intra-orally proved unsuccessful, due to the limited working space. A trans-hyoid pharyngotomy exposed the suprahyoid superstructure[2], and the vallecular mucosa was entered. The tumor was resected, and the mucosal edges were approximated with interrupted Vicryl sutures. A nasogastric feeding-tube was placed for 10 days. The tracheostomy was removed five days postoperatively. The patient was discharged 14 days postoperatively. Minor aspirations resolved entirely by the sixth postoperative week, but the patient developed permanent Horner's syndrome, impairing with his vision to some extent. Histology revealed predominantly Antoni type A tissue, with as scant volume of Antoni B regions. On immunohistochemical analysis, tumor cells significantly expressed S-100 protein, further supporting the diagnosis of schwannoma.

Schwannomas represent less than 1 % of all head and neck tumors, and due to the scarcity of neural elements in the area, only a limited number of cases have been reported in the RFS so far[1].

Their gradual enlargement in this confined space may produce symptoms and signs related to their size, namely dysphagia, dyspnea, and voice change. Preoperative imaging of choice is contrasted-medium MRI of the head and neck, which helps diagnose a retropharyngeal schwannoma but also excludes a potential vascular pathology.

Regarding treatment, schwannomas are typically resected. Since a fibrous capsule separates them from nerve fibers, the operating surgeon may excise the tumor while preserving the affected nerve. However, postoperative Horner's syndrome is likely to occur in schwannomas originating from the sympathetic cervical chain[3]. The related signs include anisocoria with ipsilateral papillary miosis, ipsilateral eyelid ptosis, and facial anhidrosis. The present case represented a second-order neuron lesion[4]. Although the surgical intervention was prompted by the significant upper-airway obstruction and proved curative to the patient, the ensuing ptosis resulted in some degree of visual impairment postoperatively. Hence, this potential complication should be discussed during preoperative patient consent, not only in cervical-spine surgery or carotid endarterectomy cases but also when removing some retropharyngeal tumors, despite careful surgical dissection.

Keywords: schwannoma, retropharyngeal, Horner's syndrome, complication, excision

Conflicts of interest
None declared.

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