LETTER / ENT

A rare benign laryngeal tumor

Keywords: Laryngeal tumor; Benign; MRI scanner; Schwannoma

Case observation

A 22-year-old female patient, with no medical or surgical history, was referred to our department for exploration of isolated dysphonia that had been gradually worsening for six months. The ENT nasofibroscopy examination found curvature of the right ventricular fold without the overlying mucosa presenting any abnormality. As a first course of action, an ENT cervical CT scan was undertaken with biphasic injection of an iodinated contrast agent. A right paraglottic, submucosal tissue mass was revealed, with a long axis of 18 mm, located under the ventricular fold (Fig. 1). This non-calcified lesion with clearly delineated margins appeared discreetly enhanced and did not show any signs of infiltration. It was nevertheless exerting a mass effect on the glottic opening, which was causing the symptoms presented by the patient. There was no associated cervical lymphadenomegaly. An additional ENT cervical MRI was then performed; the lesion was isointense with T1 weighting, hyperintense with T2 weighting, showed no diffusion restriction but intense and homogeneous enhancement (Fig. 2). With this examination, its precise submucosal paraglottic laryngeal location could be determined, and its non-aggressive nature, particularly the lack of hypercellularity. Our main diagnostic hypothesis given the clinical context was thus guided from the outset towards a benign lesion, a pleomorphic adenoma, which had developed from an accessory salivary gland. In view of these observations, treatment by electron microscope guided endolaryngeal laser surgery was decided (Fig. 3). The final conclusion from the histopathological analysis was of a schwannoma of the right ventricular fold, with no cellular atypia.

Discussion

A schwannoma is a benign nerve tumor that develops from the Schwann cells of the neurilemma, glial cells covering axons of the peripheral nervous system. The cervicofacial topography (25 to 40% of the cases described) is mainly seen as involvement of the eighth pair of cranial nerves. A laryngeal site is exceptional, the lesion in this case developing from a ramus of the supralaryngeal nerve. The various cases published have been described in adults aged between 20 and 60 years old with no predominance of either sex. The most common laryngeal locations are the aryepiglottic fold or the vestibule, glottic or subglottic sites being rarer [1,2].

Figure 1. CT acquisition after double injection of iodinated contrast agent with the Valsalva maneuver: transverse section (a) and coronal reconstruction (b). Right paraglottic tissue lesion (arrow), enhancing weakly. Note the displacement of the right arytenoid cartilage and the reduction in caliber of the glottic opening.

http://dx.doi.org/10.1016/j.diii.2014.02.023
2211-5684/© 2014 Éditions françaises de radiologie. Published by Elsevier Masson SAS. All rights reserved.
Typically, the CT scan appearance of a schwannoma is of a homogeneous ovoid tissue lesion with well delineated margins, enhancing poorly. Complementary MRI provides more information on these various CT characteristics and on the cellularity of the lesion, T2-weighted hyperintensity and the absence of diffusion restriction lending weight to a paucicellular, benign lesion [3,4]. This description of the combined typical radiological signs in CT and MRI images should help identify a benign lesion and eliminate some of the differential diagnoses in the ‘benign laryngeal lesion’ range, such as cysts and laryngoceles, lipomas, and cartilaginous and vascular lesions. These results are nevertheless rather non-specific, so that a pleomorphic adenoma glandular lesion may also be suggested.

The description of this clinical case emphasizes the importance of imaging in guiding the therapeutic ENT management of laryngeal lesions. By combining CT and MRI examinations the lesion can be precisely anatomically

Figure 2. Cervical MRI. The lesion is well delineated and its topography submucosal, with T1-weighted (a) and T2-weighted STIR (f) isointensity. It is hyperintense with T2 weighting and has a raised ADC indicating low cellularity (b and c). After contrast injection there is homogeneous enhancement, with no signs of infiltration (d and e).

Figure 3. Intraoperative images. The pre-operative endoscopy revealed arching of the right submucosal ventricular fold (a: arrowhead), displacing the right vocal cord (a: arrow). After dissection of the lesion en bloc its appearance was whitish (b: arrow).
examined, its benign character can be identified, and the etiology formulated.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References


X. Stefanovicab, O. Gallet de Santerreb, C. Cartierc, J.-F. Vendrella∗

ab Service de radiologie, clinique Beausoleil, 119, avenue de Lodève, 34070 Montpellier, France

bc Service d’oto-rhino-laryngologie, clinique Beausoleil, 119, avenue de Lodève, 34070 Montpellier, France

c Service d’oto-rhino-laryngologie, hôpital Gui-de-Chauliac, centre hospitalier universitaire de Montpellier, 80, avenue Augustin-Fliche, 34295 Montpellier, France

∗Corresponding author.
E-mail address: jfvendrell@yahoo.fr (J.-F. Vendrell)