CASE STUDY

Cervical Midline Schwannoma

Schwannoma de la línea media cervical

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A 41-year-old woman presented with an anterior cervical tumour which had been asymptomatic for 10 years and had slowly increased in size over the last 5 years. There was no medical history of dyspnoea, dysphagia, odynophagia nor any other ENT symptoms.

Physical examination revealed a cervical midline tumour 2 cm in diameter, rubbery in consistency, which did not adhere to deeper layers, was not painful to the touch and which moved on swallowing. Nasal larynx fibroendoscopy revealed no abnormalities.

The patient’s cervical scan showed a nodular lesion with well-delineated sides which measured 2 × 1.7 cm, hypodense in structure, but with echoes on the inside. The rest of the cervical ultrasound scan showed as normal.

FNPA was performed, with acellular sample findings, and a computed tomography (CT) scan of the neck without contrast (due to the patient’s allergy to this) was performed. This showed a mass located immediately below the thyroid cartilage measuring 2 × 1.8 cm maximum diameter which was hypodense, well-encapsulated with no spread to nearby structures, no presence of adenopathies, and which was compatible with a thyroglossal duct cyst with intracystic detritus (Fig. 1). As a result of the clinical and radiological findings, we suggested the patient undergo

Figure 1 Axial CT imaging showing hypodense tumour in contact with the lower side of the thyroid cartilage.

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surgical excision of the tumour and resection of the hyoid body under general anaesthesia. This was performed without complication. Anatomopathological study revealed an encapsulated tumour formed by fusiform cells with no cell atypia. The immunohistochemical study showed intense S-100 immunoreactivity, and schwannoma was diagnosed (Fig. 2). After one year of follow-up, the patient remained asymptomatic and with no signs of relapse.

Discussion

Schwannomas, also known as neurilemmomas, neuromas or neurolemomas, are rare benign tumours which are caused by abnormal proliferation of Schwann cells which form the myelin sheath of the cranial nerves (with the exception of the olfactory nerve and the optic nerve) the peripheral nervous system and the sympathetic and parasympathetic system. Malignancy is unusual. Approximately 25% to 45% of schwannomas present in the head and neck, 90% of them in the vestibular nerve, followed by the facial, trigeminal and acoustic nerve. With regards to the extracranial locations which affect the cervical region, the most frequent are those of the vagus nerve, particularly in the parapharyngeal space, of the cervical sympathetic chain and of the brachial plexus, with other locations being much less frequent. Wherever they are located, the presence of neurinomas or extracranial schwannomas rules out neurofibromatosis type I, with a solitary presence not being infrequent. Extracranial head and neck schwannomas may present at any age and there is a certain predominance in females. The clinical evolution of these lesions is slow, which is why they are usually of a considerable size when patients consult. The most frequent form of presentation is that of an asymptomatic mass. They may present signs or symptoms which are usually related to the mass effect or deficit of the affected nerve. The treatment of these tumours consists in complete surgical extirpation of the lesion. Total elimination of the tumour is frequently achieved, but subtotal or almost total resection may be indicated to try to preserve nerve function, but with no guarantee of subsequent functioning of the nerve of origin. Postoperative morbidity is associated with injury to the nerve due to the surgical approach and/or the resection of the nerve involved. It is therefore important to know what the nerve of origin is. On our case the location is unusual, given that we did not find any obvious nerve origin from which the tumour arose, as at this level there are no major midline nerves. We found no identical cases in literature to the one presented in this article. Due to the unusual location, clinical diagnosis in our case was mistaken, and information from the CT imaging without contrast was insufficient. In the CT scan, the schwannoma was observed as a hypodense mass with well-defined limits which did not infiltrate nearby structures. The thyroglossal duct cyst (the diagnosis suggested by the CT) is the most common congenital mass in the neck and may appear anywhere between the base of the tongue and the sternum area, with standard typical location in the cervical midline. In general it is clinically diagnosed and the role of the imaging tests is to confirm the clinical diagnosis, identify the thyroid glands and provide preoperative information about the presence or absence of solid intracystic tissue. CT imaging in the thyroglossal cyst showed a hypodense mass, but with inferior densities (liquid density). In the examination using magnetic resonance, the schwannoma appears as an isointense or slightly hyperintense mass in T1 and a hyperintense mass in T2, after the administration of gadolinium. In the case of a thyroglossal cyst, examination would show a mass of cystic characteristics in T2 and isointense in T1, similar to schwannoma, but with no enhancement in T1 after the injection of contrast. Frequently, when treating lesions like the ones involved in the clinical case under discussion where growth is slow, and the location is compatible, standard, and asymptomatic, no specific imaging tests are performed, since diagnosis is clinical. In cervical midline tumours, and thyroglossal cysts, we should make a differential diagnosis of dermoid cyst, cervical adenopathies and malignant tumour. Since a definitive diagnosis cannot be obtained by examination and imaging tests, nor malignant tumours be ruled out, diagnosis has to be histopathological. FNPA may serve as a guide in the majority of cases, but the final diagnosis is obtained from the anatomopathological study of the surgical specimen. To conclude, an atypically located cervical schwannoma presented which led to an initially erroneous suspected diagnosis.

Conflict of Interest

The authors have no conflict of interests to declare.

References

