CASE STUDY

Multiple Ganglioneuroma With Cervical Involvement

Ganglioneuromas múltiples con afectación cervical

Óscar E. Cazorla Ramos, * María Dolores Aguilar Conde, Eva Flores Carmona, José R. Solano Romero

Servicio de Otorrinolaringología, Hospital Virgen de la Victoria, Instituto Biomédico de Málaga, Málaga, Spain

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Clinical Case

A 62-year-old male, who was a regular smoker and drinker, presented at the ENT Department with a laterocervical tumour which had evolved over several months. There were no clinical symptoms involved, except local irritation in the area and a gradual increase in tumour size.

Examination revealed a 7×4 cm right laterocervical mass at levels II−III, which was elastic in consistency and nondisplaceable; there were no signs of inflammation.

Nothing of significance was observed on examination of the oral cavity. A naso-fibrobraryngoscopy revealed right pharyngeal swelling, at the same level as the cervical tumour protrusion and we found no other pharyngolaryngeal lesions or alterations in vocal cord motility.

The cervicothoracic CT scan (Fig. 1A) showed a lesion with the same density in its soft parts, with hyperdense foci, and extensive peripheral calcification, measuring 4.4×3.3×5.1 cm, located on the right posterolateral level, posterior to the ipsilateral internal carotid artery. There were no other notable cervical findings. However, in the last thoracic incisions, the presence of another tumour with identical characteristics was discovered, attached to the back wall of the gastric corpus, measuring 5×4×4.3 cm. For this reason, we extended the study of the abdomen (Fig. 1B), where this finding was confirmed.

By means of an ultrasound guided FNA, amorphous material with calcification was obtained, and with no epithelial cellularity, but it did not provide sufficient information to confirm the disease. In the absence of diagnostic guidelines, we considered it imprudent to make an incisional biopsy, and we therefore requested a cervicofacial MRI and a CT guided percutaneous biopsy, together with an assessment by the Internal Medicine Department.

The imaging test did not provide any new data, and the material extracted did not contain sufficient cellularity to establish a histological classification. The broad study performed by the Internal Medicine Department, including serology and bacilloscopy, ruled out any infectious aetiology.

Figure 1  (A) Cervicothoracic CT scan showing heterogeneous lesion with large-scale peripheral calcification, posterior to the internal carotid artery.  (B) Abdominal CT scan showing lesion next to the posterior gastric wall.

* Corresponding author.
E-mail address: drcazorla@gmail.com (Ó.E. Cazorla Ramos).

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lesions in surgery. However, it is still difficult to discriminate GN from other cervical lesions. The use of FNA is frankly limited and the only method of diagnostic confirmation is surgical excision, also taking into account the possibility of clinically presenting malign neoplasms and with similar radiological characteristics such as neuroblastomas or ganglioneuroblastomas. Possibly the only way of suspecting this diagnosis is a thorough knowledge of GN and keeping them in mind as a possibility.

In our case, complexity increased due to the particular age of the patient and the unusual existence of another abdominal tumour. Although cases of multiple GN have been described in the cervical area,\textsuperscript{1,3} multiple GN in 2 distinctive anatomical locations are extremely rare.

Studies have been made regarding the concurrence of neuroectodermal crest tumours in patients affected by type I neurofibromatosis, although their higher frequency than in the general population\textsuperscript{7} has only been confirmed in pheochromocytoma. In this case, neither the clinical symptoms nor examination were compatible with the existence of neurofibromatosis.

Treatment of GN consists of complete surgical resection, and the patient should be warned of the probable neurological sequelae.\textsuperscript{10} Due the possibility of local recurrences\textsuperscript{1} there is a need for periodic imaging testing during follow-up.

**Conflict of Interest**

The authors have no conflicts of interest to declare.

**References**