CASE STUDY

Intraparotid Multiple Facial Nerve Schwannoma

Eduardo A. Mena-Domínguez, a José I. Benito-Orejas, a,∗ Dario Morais-Pérez, a María A. Álvarez-Quiñones b

a Servicio de Otorrinolaringología y Patología Cérvico-Facial, Hospital Clínico Universitario de Valladolid, Spain
b Servicio de Anatomía Patológica, Hospital Clínico Universitario de Valladolid, Spain

Introduction

Schwannomas are benign primary neuro-ectodermic tumours originating from Schwann cells.1 Single or, less frequently, multiple,2 they are slow-growing and manifest as a solid asymptomatic mass, at least until a considerable size is reached.3 Involvement of the intraparotid portion of the facial nerve is highly infrequent, with fewer than 100 cases reported in the literature.4−6 There are no radiological signs allowing a precise differential diagnosis3,7 and a fine-needle aspiration biopsy (FNAB) is non-specific.8

Case Report

Male, 63 years old, attending due to the presentation of a right retromandibular tumoration, rounded, hard and without pain, lasting for several years without any other associated symptoms. Facial mobility was normal. Both the ultrasound and magnetic resonance (MR) images (Fig. 1) report indicated 2 nodular tumorations, measuring 3.4 and 4.3 cm, respectively, located on the superficial and deep portions of the upper pole of the right parotid. The FNAB suggested a mixed tumour.

Following a diagnosis of suspected pleomorphic adenoma, we recommended the extirpation of the tumour through a parotidectomy. Despite careful dissection and the establishment of all the anatomical references, we were unable to locate the exit of the facial nerve trunk. The Figure 1 Heterogeneous hyperintense double tumoration (solid and cystic), located on the upper pole of the right parotid gland (T2 weighted MR, coronal section).

Please cite this article as: Mena-Domínguez EA, Benito-Orejas JI, Morais-Pérez D, Álvarez-Quiñones MA. Schwannoma múltiple del nervio facial intraparotídeo. Acta Otorrinolaringol Esp. 2013;64:444-446.

∗ Corresponding author.
E-mail address: jibenito@ono.com (J.I. Benito-Orejas).
tumoral areas could be visualized after lifting the cutaneous flap, which enabled them to the extirpated through enucleation.

During the post-operative period, the patient developed complete paralysis on the right side of his face (grade VI on the House-Brackmann scale). No reparatory surgery was carried out as the patient deceased months later without any apparent reason.

The pathological diagnosis was of a Schwannoma on the parotid facial nerve. It described 2 encapsulated tumoral areas comprising spindle-shaped neural cells arranged in areas of great cell density, alternating with other looser, hypocellular areas in a myxofibrillary matrix (Antoni B) (Fig. 2). In some fields, these form nuclear palisades and Verocay bodies (Antoni A).

Discussion

Treatment of intraparotid facial nerve schwannomas poses a challenge, derived from the diagnostic difficulty and the major aesthetic and functional consequences potentially arising from surgery. O

Having a pre-operative diagnosis of intraparotid facial nerve schwannoma would enable patients to understand the benign nature of their tumour and the serious surgical consequences that might ensue from its extirpation. Of the 52 patients reviewed by Bretlou et al., however, only 4 had a correct pre-operative diagnosis.

Suspicion is therefore usually established intraoperatively, despite the possibility, as stated by Caughey et al., of the most expert parotid surgeons facing a single case in their lives. The fundamental sign that must lead us to think of an intraparotid facial nerve schwannoma is the ‘‘difficulty in locating the facial nerve’’. Equally indicative, however, is the tumour’s adherence to the nerve branches, and the appearance of facial contractions on electrical stimulation of the tumour.  In these cases, the performance of an intra-operative biopsy is indicated.

If the intra-operative suspicion is confirmed, Alicandri et al. describe an action protocol that relates the tumour’s position on the nerve trajectory with the possibilities of a lesion during resection.

Finally, this case report adds the peculiarity of presenting with 2 apparently independent nodular tumoralations, thus increasing its rarity, were this possible. Koide et al. were the first to publish a multiple neurinoma of the intraparotid facial nerve in 1966. Since then, discussion has continued regarding the mechanism underlying the development of multiplicity. The hypotheses adduced include whether the tumours might be attached by tumoral bridges or whether the tumours, as our case seems to show, might be growing multicentrically.

Conflict of Interest

The authors have no conflict of interest to declare.