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CASE STUDY

Nasopharyngeal Oncocytoma as a Cause of Eustachian Tube Dysfunction☆

Oncocitoma nasofaríngeo como causa de disfunción tubárica

Shirley J. Pérez Pérez,[a,*] Carlos Almódovar Álvarez,[b] José Diego Contreras Sánchez,[a] Alberto Iñiguez de Onzoño[c]

[a] *Servicio de Otorrinolaringología, Complejo Universitario de Albacete, Albacete, Spain*
[b] *Servicio de Otorrinolaringología, Hospital 12 de Octubre, Madrid, Spain*
[c] *Servicio de Anatomía Patológica, Complejo Universitario de Albacete, Albacete, Spain*

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A 74-year-old male who presented with bilateral hearing loss. In the otoscopy both ears showed signs of serous otitis. In the audiometry there was mixed hearing loss with thresholds between 30–50 dB and GAP of bilateral 20–30 dB with flat acoustic impedance curves. Flexible nasal endoscopy revealed a small nasopharyngeal mass located in the centre, with a cyst-like appearance and packed mucosa. The CAT non-contrast scan requested showed the nasopharyngeal tumour and also infiltration to both middle ears. Medical treatment with intranasal corticosteroids was administered, with clinical otitis and hearing loss persisting, for which bilateral long-duration transtympanic ventilation tubes were inserted.

Follow-up showed an increase in the nasopharyngeal mass with normal mucosa, for which a CAT non-contrast scan was performed. The tumour had a lower cystic component, with no bony erosions. It was decided that new transtympanic drains be inserted and a biopsy of the mass be performed. An MRI was performed for other reasons and showed the cyst-like tumour (Fig. 1).

An incision of the tumour was made, from which abundant mucous content exuded and complete removal of the mass and surrounding tissue was then performed.

Fragments of connective tissue with cellularity of lymphoid tissues were identified from the anatomopathological study. These were encased in respiratory cylindrical epithelium cells with intussusception, several of them dilated. Solid cell focal point accumulations were present with esophilic and granular cytoplasm (corresponding to oncocytic cells). Since there was a presence of standard oncocytic cells no immunohistochemical study was performed (Fig. 2A and B).

The patient's evolution was satisfactory with periodical follow-up and he is currently asymptomatic. In a new CAT scan which was performed as a result of intellectual impairment, the tissue removal was observed and there were no signs of relapse.

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* Corresponding author.
E-mail address: shijam@hotmail.com (S.J. Pérez Pérez).

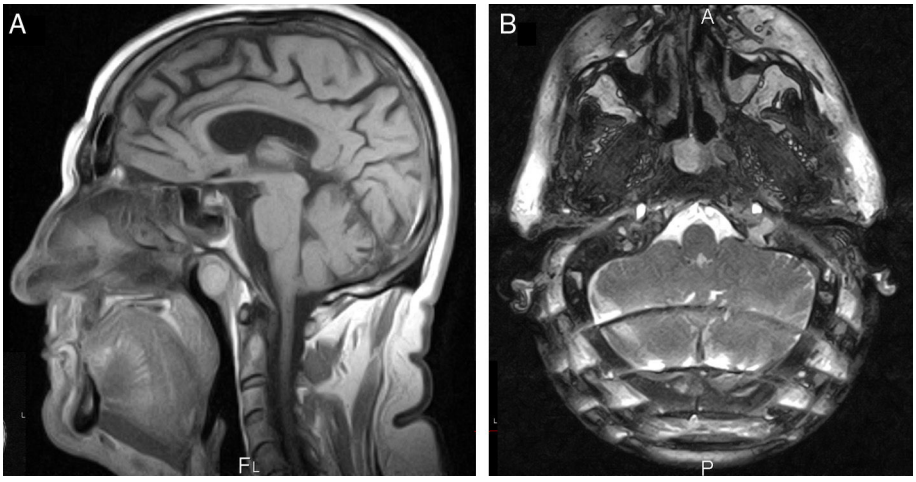

Figure 1 (A) MRI sagittal slice: rounded nasopharyngeal tumour is observed, of cyst like appearance. There are no bone erosions nor sign of changes in surrounding tissues. (B) Nasopharyngeal tumour in axial slice.

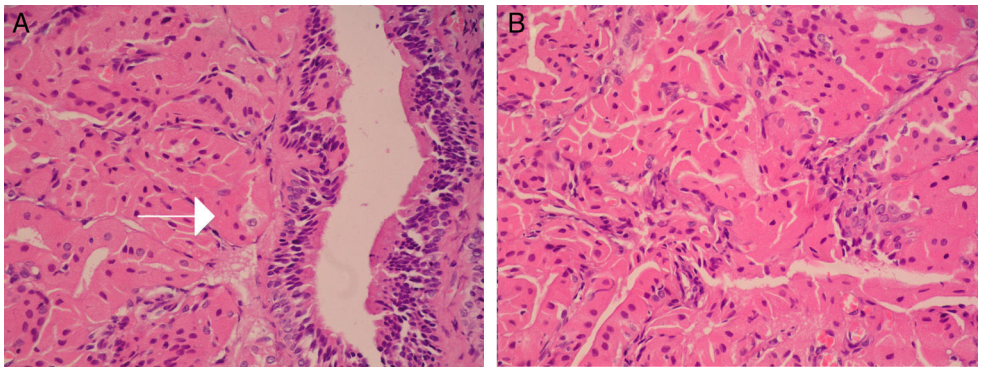

Figure 2 (A) Comparison of actual respiratory tissue of the nasopharynx contrasted with oncocytic tissue (arrow). (B) Solid oncocyte cell clusters.

Discussion

Clinically, the majority of benign nasopharyngeal lesions are asymptomatic and are diagnosed incidentally by rhinoscopy or imaging studies performed coincidentally. Recognition of these tumours requires clear knowledge regarding their topographic and radiologic characteristics.[1]

In the nasopharyngeal area there are a number of benign tumours, with cystic ones being the most common. They are divided up in accordance with their medial or lateral location and depending whether their origin is congenital or acquired.

The retention cysts and the oncocytoma cysts are representative of acquired cysts.[2] Ben Salem et al. Showed that the frequency of oncocytomas in the nasopharynx is very low, with only a few cases described in the literature.[2] We should mention the non oncocytic tumours composed of cells with histological characteristics which are similar and which may imitate their morphology. For differentiation between oncocytic tumours and oncocytic-like tumours a histopathological study is required.[3]

Oncocytic metaplasm changes increase with age and occasionally these cells may form a clearly visible tumour.[4–6]

Oncocytoma is a benign tumour composed of large, eosinophyl and granular cells. According to the WHO classification from 2005, the papillary oncocytic cystadenoma (as this classification is called) is included within the group of benign empithelial tumours of the head and neck, replacing the adenoma of basal cells (basaloid) of the previous 1991 WHO classification.[7] It also receives the names of onocytic cyst, papillary oncocytic cystoadenomatosis, oncocytic adeomatous hyperplams, oxyphil adenoma, oncocytoma and adenolynfoma in laryngocele.[1,8]

The most well used theory for explaining the origin of these tumours explains that probably inclusions of the Gerlach tonsils and of minor salivary glands of the nasopharynx promote the appearance of oncocytomas. They have been reported in glandular tissues throughout the body, including the thyroid gland, parathyroid, salivary glands, suprarenal glands, kidney, pancreas and liver.[4,9] Their location in the head and neck is extremely rare, within this group they usually appear in salivary glands, with the parotid gland being the most affected (although it represents under 1% of salivary gland tumours).[10]

In the nasopharynx the primary symptoms of oncocytomas are otitis media with discharge and tubaric dysfunction due to obstruction, although in general, they are not

normally major tumours. Perilesional oedema presents, which is what really causes the symptoms. Topografically they may be uni or bilateral (around the orifices of the Eustaquian tube) and radiology is characterised by having fluid density in the CAT scan and high signals in T1 and T2.[1]

One of the first nasopharynx cases reported was carried out by Guggenheim in 1961, who described 2 rare tumours located in the rhinopharyx, one of which was an oncocytoma. Erlanson and Tandler described the presence of oncocytomas in the nasopharynx in a document published in 1977, which reports on the presence of oncocytes in the nasopharynx mucosa. The histological study performed for their patients described the oncocytic cells were distributed in two ways: typical and condensed, typical having the previously mentioned characteristics (cytoplasm with abundant mitochondria, clear cytosol and free ribosomes), whilst the condensed ones were described as having very thick mitochrondria with hardly any visible cytosol.[9,10]

The most extensive series probably reported up to now was that made by Morin et al., who observed oncocytic pharyngeal metaplastic changes in 30 patients as well as 8 of the cases analysed having otitis media symptoms with effusion and tubaric dysfunction. One has to take into account that this work specifically speaks of metaplastic changes with no mention of solid formations or cysts as such.[11]

Surgical excision is the treatment of choice, similarly to those located in major and minor glands. In contrast to this, authors like Morin et al. consider that since they are benign, surgical treatment would only be indicated if there local symptoms are also present. For the majority of authors, however, the treatment of choice is complete resection of the tumour.[11]

Conflict of Interests

The authors have no conflict of interest to declare.

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