

Nasopalatine Duct Cyst: Case Report

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Nasopalatine cysts are the most prevalent of non-odontogenic cysts in the oral cavity. Their origin, however, is still a source of controversy. We report the case of a patient with a mass in the anterior half of the hard palate following months of evolution, with a review of the literature.

Key words: Nasopalatine duct cyst. Non-odontogenic cysts. Maxillary cyst. Cyst of the hard palate.

Quiste del conducto nasopalatino: a propósito de un caso

El quiste nasopalatino es el más frecuente de los quistes no odontogénicos de la cavidad oral. Su origen, no obstante, sigue siendo motivo de controversia. Se presenta el caso de un paciente que consulta por una tumoración en la mitad anterior del paladar duro de meses de evolución y realizamos una revisión bibliográfica de esta enfermedad.

Palabras clave: Quiste del conducto nasopalatino. Quiste no odontogénico. Quiste maxilar. Quiste del paladar duro.

INTRODUCTION

Non-odontogenic epithelial cysts of the jaw include nasopalatine cysts (NPC) and nasolabial or nasoalveolar cysts; taken together, these represent 5% of maxillary cysts.¹

Although NPCs are the most frequent, with an incidence of 1% in post mortem studies,¹⁻⁴ the review by Elliot et al² of the English-language literature from 1960 to 2004 found only 468 published cases. They may present at any age, but are mostly diagnosed in adults (40-60 years of age), males (3/1), without any clear racial dominance.¹

CASE REPORT

A 31-year-old male attended our department due to the appearance of a tumour in the front part of his palate.

An egg-shaped mass of firm consistency, not painful and in a sub-mucosal location, was observed in the retroincisive portion of the hard palate, bulging slightly the floor of the left nasal vestibule.

The radiological study revealed a cystic tumour measuring 2.2 x 2.5 x 2.2 cm in the region of the nasopalatine duct, laterally separating the roots of the central incisors (Figure 1).

The authors have indicated there is no conflict of interest.

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Figure 1. Axial slice of the nasopalatine cyst with displacement of the central incisors.

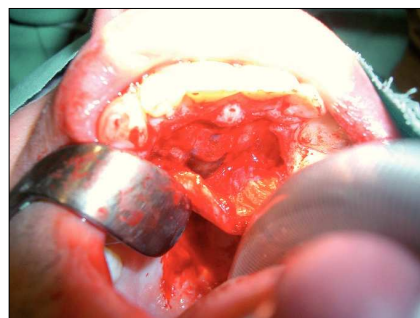


Figure 2. Exeresis of the cyst by the transpalatine approach.

Cystic enucleation was performed using the transpalatine approach (Figure 2). By means of a mucoperiosteal flap with a posterior hinge, the cyst was exposed, then the bone shell covering it was eliminated and the bony margins ground down to facilitate dissection to the anterior pedicle where it was severed at the level of the nasal mucosa. A single stitch was applied without the cavity being filled in.

The pathology analysis reported a cystic tumour coated in respiratory epithelium, compatible with an NPC.

DISCUSSION

NPCs develop in the bony nasopalatine channel located at the anterior tip of the suture line of the palatal apophyses of maxillary bones. Lower mammals have inside this conduit a permeable "nasopalatine duct" that acts as an ancillary olfactory organ (vomeronasal or Jacobson's organ).³ Although NPCs were initially thought to originate from fissures,³ they are now believed to derive from incompletely developed epithelial remains in the embryonic nasopalatine channel.² The reasons for this incomplete development and the origin of the cyst stemming from these epithelial remains are as yet unknown.¹

Their mean size varies from 6 mm (any smaller sizes are considered a normal incisor hole) to 17 mm.¹ The lesion is asymptomatic in half the cases and the is usually by chance on the occasion of a dental x-ray.³ Clinical presentation generally involves mobility of the upper middle incisors and signs stemming from ensuing infection.¹

Radiological and histological examination are the 2 essential tests to confirm the diagnosis.¹ Radiology (panorama of the mouth, occlusion imaging or computerized tomography) reveals a radiotransparent area between the central upper incisors, either round, oval, or in the classic heart-shape of a deck of cards.¹⁻³ In the histological study, the epithelium lining the cyst is respiratory, squamous, or a mixture of both, depending on location.¹⁻³

Surgical enucleation is the treatment of choice due to its low recurrence rate,² whereas marsupialization would be indicated for very large cysts with a risk of oronasal fistula.¹⁻⁴ The route of the approach (palatal or vestibular) depends on the size, location and mouth, and dental status of the patient.¹

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