

Pleomorphic adenoma of the soft palate diagnosed by magnetic resonance imaging. A case report

Adenoma pleomórfico del paladar blando diagnosticado por resonancia magnética. Presentación de caso

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Summary

Pleomorphic adenoma is the most common benign tumor of the salivary glands, and the most common site is the parotid gland. Localization in the salivary glands and soft palate is rare. We describe the case of a 10-year-old boy with a painless mass in the soft palate in which MRI with contrast was performed for adequate characterization. The main MRI findings are described for radiologists to have as a possible differential diagnosis when faced with a similar case.

Resumen

El adenoma pleomórfico es el tumor benigno más común de las glándulas salivales, el sitio más frecuente es la glándula parótida. La localización en glándulas salivales en el paladar blando es poco frecuente. Se describe el caso de un niño de 10 años de edad con una masa indolora en el paladar blando en quien se realizó una resonancia magnética con medio de contraste para su adecuada caracterización. Se describen los principales hallazgos por resonancia magnética para que el radiólogo lo tenga como posible diagnóstico diferencial cuando se enfrente a un caso similar.

Introduction

Pleomorphic adenoma of the soft palate is rare, its most common location is in the parotid gland. Magnetic resonance imaging (MRI) plays a crucial role in the diagnosis and treatment planning for this pathology, as it allows characterizing the location, size and extent of pleomorphic adenomas in the soft palate. This influences decision making such as early surgical resection due to its higher risk of malignancy (1).

Case report

Patient 10 years old, with no relevant history. A few months ago she presented painless mass in the soft palate. She has not had fever or weight loss. Her treating physician requested MRI with contrast medium to characterize the soft palate lesion and define the treatment.

MRI with gadolinium of the head and neck was performed, which confirmed a round lesion, located in the soft palate, with characteristics compatible with pleomorphic adenoma.

Discussion

Pleomorphic adenoma is a benign tumor affecting major and minor salivary glands (2). It has a prevalence of 3-5% in head and neck tumors. Of these, only 15-20% are in the minor salivary glands (3), while the parotid gland is the most frequent location (4). Generally, it is a slow-growing, mobile lesion that can generate edema and mild pain (5). Its location in minor salivary glands has a higher risk of malignancy than in major salivary glands (6). Histologically, it is characterized by the presence of epithelial and mesenchymal cells (7).

Pleomorphic adenomas affect any age, but are most prevalent in the fourth, fifth and sixth decades of life. Diagnosis is based on the relationship of clinical findings, physical examination, imaging findings and histology. The main differential diagnoses are adenoid cystic carcinoma and pleomorphic adenocarcinoma. Adenoid cystic carcinoma differs from pleomorphic adenoma in that it presents less signal intensity in T2 sequences, and pleomorphic adenocarcinoma is usually more irregular with heterogeneous signal intensity and enhancement (8). MRI plays a fundamental role in the diagnosis of

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pleomorphic adenomas. It helps to define the exact location of the tumor, its extension into neighboring tissues, size and relationship with vascular or nerve structures for possible surgical resection. Typical MR findings are presented in Figure 1 and include: high signal intensity in T2-weighted images, in most cases with a low signal halo around the lesion, representing the fibrous capsule of the tumor (Figure 1a), low signal intensity in T1-weighted sequences (Figure 1b) and presence of homogeneous enhancement with contrast medium (Figures 1c, d) (9).

In the case of this patient, the characteristics of the lesion coincided with those described in the literature (homogeneous signal intensity in the T1 and T2-weighted sequences, and homogeneous enhancement with contrast medium), and pleomorphic adenoma was suggested as the first diagnostic possibility. Surgical resection was performed and the histopathological report was "pleomorphic adenoma".

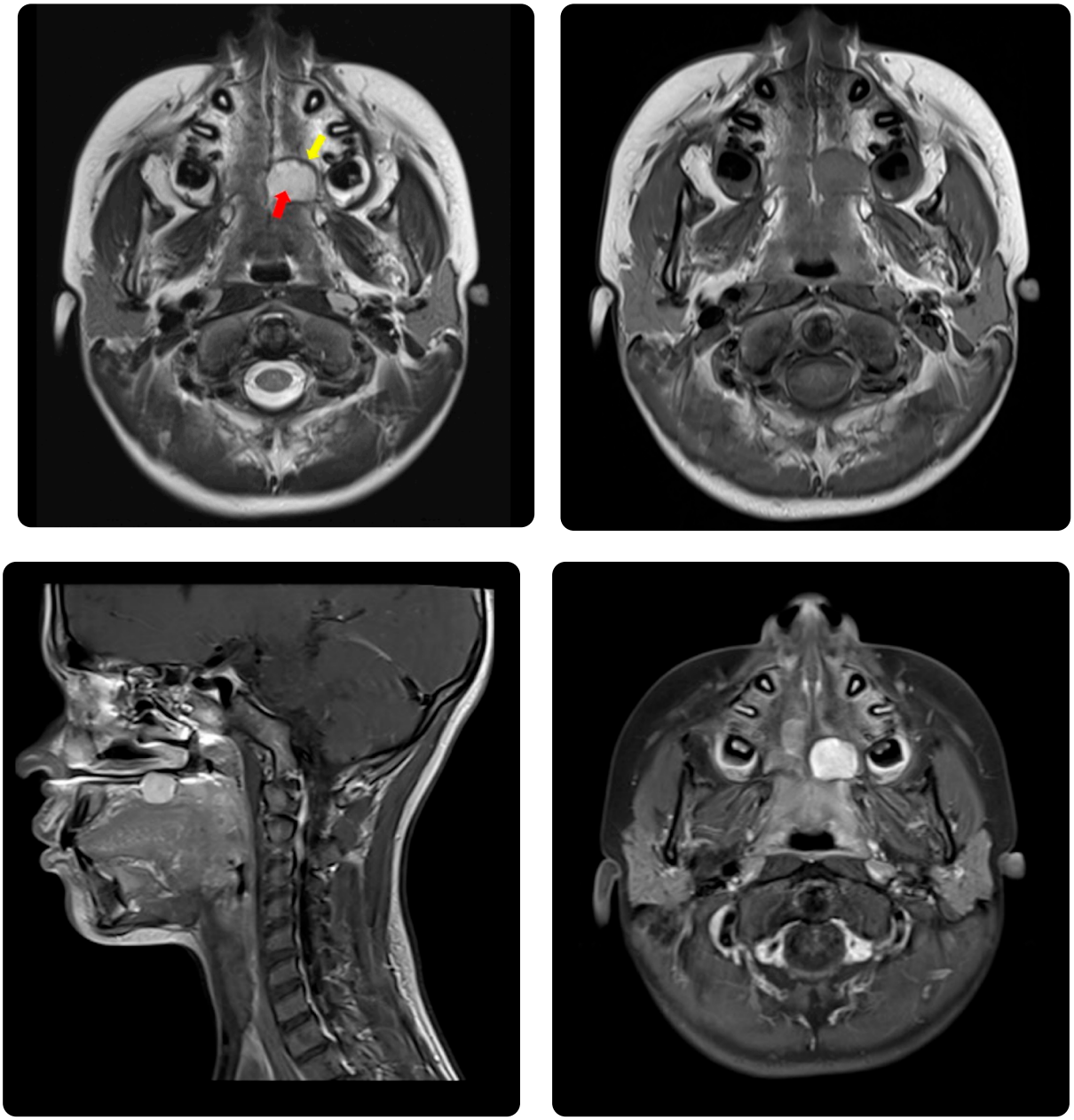


Figure 1. MRI of the head and neck with contrast medium. a) T2-weighted image, axial view. Rounded, high-signal solid lesion, with well-defined borders, located on the left side of the soft palate (red arrow). The lesion shows a thin ring of low signal around it (yellow arrow), corresponding to the fibrous capsule. b) T1-weighted image without contrast medium in axial section. It shows that the lesion has intermediate to low signal intensity. c-d) T1-weighted image with contrast medium (gadolinium) in sagittal (c) and axial (d) sections showing homogeneous enhancement of the lesion.

Conclusion

Pleomorphic adenoma of minor salivary glands is a low frequency head and neck tumor with a higher risk of malignancy than in major salivary glands. MRI plays a fundamental role in the characterization of head and neck tumors, thanks to its ability to distinguish and detail different tissues. The radiologist must know its most frequent imaging characteristics for its adequate diagnosis and thus, together with the surgeons, decide the surgical treatment in advance.

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