Pleomorphic adenoma of the submandibular gland

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CASE REPORT

A 16-year-old boy was observed in our hospital, by the presence of a right submandibular mass, with progressive and painless growth, with about one year of evolution. The patient denied any other type of symptomatology. Clinical observation revealed the presence of a right submandibular mass, with approximately 2 cm in diameter, a hard/elastic consistency, painless, without adherence to the deep or superficial planes. There were no functional deficits in relation to the marginal branch of the facial nerve, the lingual branch of the trigeminal nerve, or the hypoglossal nerve.

Imaging of the cervical computed tomography (CT) scan revealed a right, hypodense, and hypocapant submandibular nodule, with approximately 2.5 cm (Figure 1A–C), with homogeneous and regular contours. The fine needle aspiration cytology was inconclusive, however, excluding the presence of dysplasia or neoplasia.

The patient was operated under general anesthesia, submitted to the right submandibular gland surgical excision (complete sialoadenectomy). The presence of a nodule was considered an integral part of the right submandibular gland (Figure 2 A, B), regular, capsulated, without invasion of neighboring structures. There were no intercurrences in the postoperative period.

The histological analysis revealed the presence of the submandibular gland about $45 \times 25 \times 20$ mm, associated with a well-circumscribed elastic nodule, $22 \times 20 \times 20$ mm, whose microscopic analysis was compatible with a pleomorphic adenoma, showing an epithelial component with ducts and myoepithelial cells, dispersed in a myxoid stroma (Figure 3).

After three years of follow-up, there are no signs or symptoms suggestive of relapse.

DISCUSSION

The pleomorphic adenoma is the most frequent benign tumor of the salivary glands, however, it is rarely present in children or adolescents [1]. Known as a benign mixed tumor, pleomorphic adenoma accounts for about 60% of all benign tumors affecting the salivary glands [2], being more frequent in the parotid gland [3]. It occurs in the submandibular and sublingual glands in about 8–10% of cases [3]. Usually, it is a tumor that affects adults between
30 and 60 years of age, being more frequent in females [2, 4]. Clinically, it is characterized by the presence of a regular mass, with painless and progressive growth, as described in the case report. It is able to reach large dimensions, compromising neighboring anatomical structures [5].

The cytologic diagnosis is obtained through fine-needle aspiration [2]. Incisional biopsy is not indicated, since it may lead to the extension of tumor cells externally to the capsule [5]. Imaging diagnosis can be performed by ultrasound or CT scan, but magnetic resonance imaging (MRI) is the first choice exam.

Histologically, it presents as a capsulated tumor, being constituted by a mixture of ductal and myoepithelial cells, whose differentiation is, respectively, epithelial and mesenchymal. It can be classified in cellular type (rich in epithelial cell) or myxoid type (rich in stromal) [6]. Besides this, there are several histological presentations and so, it is called “pleomorphic” [2].

The treatment is the same in adults and children [4], with surgical excision in block, with negative margins, being the first choice option. Recurrence is rare, but the tumor enucleation increases its risk [1]. Surgical complications are not frequent [1]. It is estimated that the risk of malignancy, originating a “carcinoma ex-pleomorphic adenoma,” is around 25% [3]. The acceleration of tumor growth and the appearance of adenopathies, associated with facial paralysis, are signs of probable malignization [4]. Tumors of the salivary glands represent an important group of masses that reach the head and neck [5].

CONCLUSION

Pleomorphic adenoma is the most frequent tumor, however, in the pediatric age, the inflammatory and congenital cervical masses are more frequent than the tumor origin.

Keywords: Pediatric age, Pleomorphic adenoma, Salivary tumor

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REFERENCES


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Author Contributions

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Figure 3: Pleomorphic adenoma (H&E, 40x)—Mixed benign tumor with epithelial component with ducts and myoepithelial cells dispersed in a myxoid stroma.
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Authors declare no conflict of interest.

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All relevant data are within the paper and its Supporting Information files.

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