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Case Report

Angiofibroma of the nasal septum in a 5-year-old female patient: Case report and literature review

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ABSTRACT

The extranasopharyngeal angiofibroma is a rare entity that mainly affects the male population. According to the revision carried out, there are only three reported cases of female patients at pediatric ages, none of which were originated in the nasal septum. There is a case of a 5-year-old female patient with recurrent epistaxis, in which a nasal mass was found attached to the septum. For this case, endoscopic resection was performed prior to embolization, with minimal bleeding and no need for nasal clogging after the procedure. The histopathological study confirmed the presence of an angiofibroma. This is the first reported case of angiofibroma of the nasal septum in a female pediatric patient.

1. Introduction

Extranasopharyngeal angiofibromas are benign tumors histologically similar to their nasopharyngeal counterparts. The latter occur almost exclusively in adolescent males between the ages of 10 and 25 [1–3], and statistically correspond to 0.05% of head and neck tumors [1]; their histology shows vascular proliferation that typically produces unilateral nasal obstruction and epistaxis. Moreover, extranasopharyngeal angiofibromas, although reported in women, are very rare in this population, and according to the review we made there are only thirty of these cases in female patients [4–11]. Only five of these cases were originated in the nasal septum, all of them in the adult population.

There is a case of a 5-year-old female patient who was evaluated at the Otorhinolaryngology service of the Hospital Universitario del Valle, for recurrent unilateral epistaxis on the right side. Imaging studies and endoscopic evaluation were performed, and a mass of vascular aspect dependent on the right side nasal septum was found. By Transnasal Endoscopic Surgery (TES) after embolization, total resection was achieved, with good bleeding control during the surgical procedure and without subsequent bleeding. The histopathological study of the specimen reported Angiofibroma. The karyotype confirmed genotype 46 XX.

2. Clinical case

A 5-year-old school patient, from the city of Popayan (Cauca), presented a clinical case evolving for two months. It consisted initially of scarce epistaxis through the right nasal cavity, which became persistent and abundant, accompanied by hematemesis, hyporexia, obstructive breathing symptoms and interrupted sleep.

In initial consultations, right Kiesselbach's plexus hypertrophy was described. At least three cauterizations with silver nitrate were performed for this reason. The patient was referred to the Hospital Universitario del Valle in February 2015, with a diagnosis of recurrent epistaxis. At the initial physical examination, cauterization stigmas were described on the right nasal septum, Cottle 2 zone, scarce bleeding of posterior origin.

It was decided to hospitalize the patient, after controlling the epistaxis with absorbable Hemostatic (Surgicel®), documenting hemoglobin of 7.5 g/dL, and, as per Paranasal Sinus tomography, an evidence of a soft tissue density lesion in the right nostril (Fig. 1), reason why she was taken to endoscopic revision, finding a mass of very vascularized appearance in the right nostril, that went to the nasopharynx and entered the left nostril through coana.

Nuclear Magnetic Resonance Imaging (MRI) with contrast showed an injury that was projected to the right sphenopalatine foramen, and to the nasopharyngeal lumen, with intense reinforcement when applying contrast, which may correspond to

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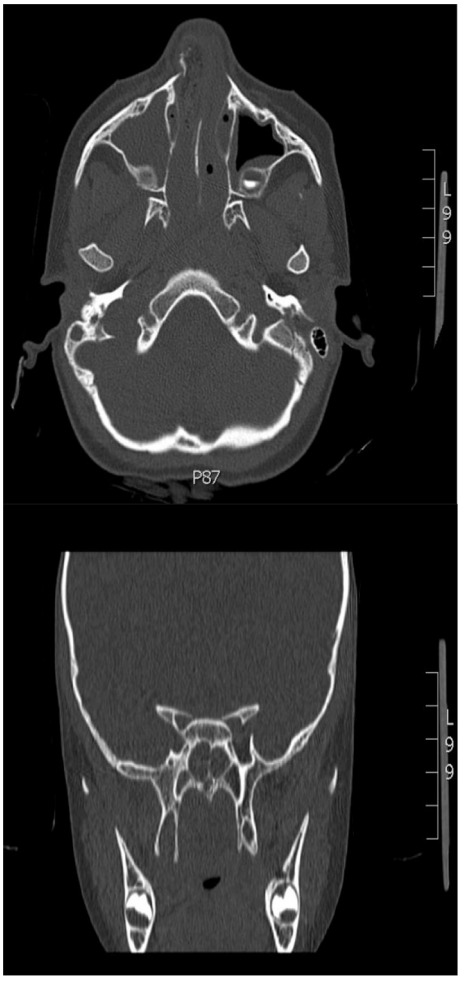

Fig. 1. CT of paranasal sinuses. In the axial image (right), nasopharynx occupancy by mass is observed. The presence of a mass in the nostril cannot be properly valued, as it is found with anterior nasal clogging at the time of the study. There is no expansion of pterygopalatine fossa.

juvenile nasoangiofibroma Vs. polyp; measurements of 20 mm of transverse diameter and 6 mm of anteroposterior diameter (Fig. 2).

Surgical resection was decided, with previous angiography and embolization to reduce bleeding during surgery. The angiography showed a vascular conglomerate in the right nostril to posterior, which originated from the internal maxillary artery. Embolization was performed at this level.

With Transnasal Endoscopic Surgery performed 48 hours after embolization, a complete resection of a mass of vascular aspect and easy bleeding, of 20 × 15 × 15 mm in size, adhered only to the right side nasal septum, which extended through the coana to the left nostril, was achieved without infiltrating any structure on that side. Intraoperative bleeding was low and no postoperative nasal clogging was required (Fig. 3). The pathology report described a lesion consisting of proliferation of blood vessels with characteristics mostly of capillary type and, in a lower proportion, of angiofibromatosis type, with mature cells, consistent with Angiofibroma (Fig. 4).

Given the few reported cases of nasal Angiofibroma in female patients, it was decided to perform a karyotype, which confirmed the patient's Genotype XX. The patient has been monitored during 12 months, and no recurrence has been evidenced.

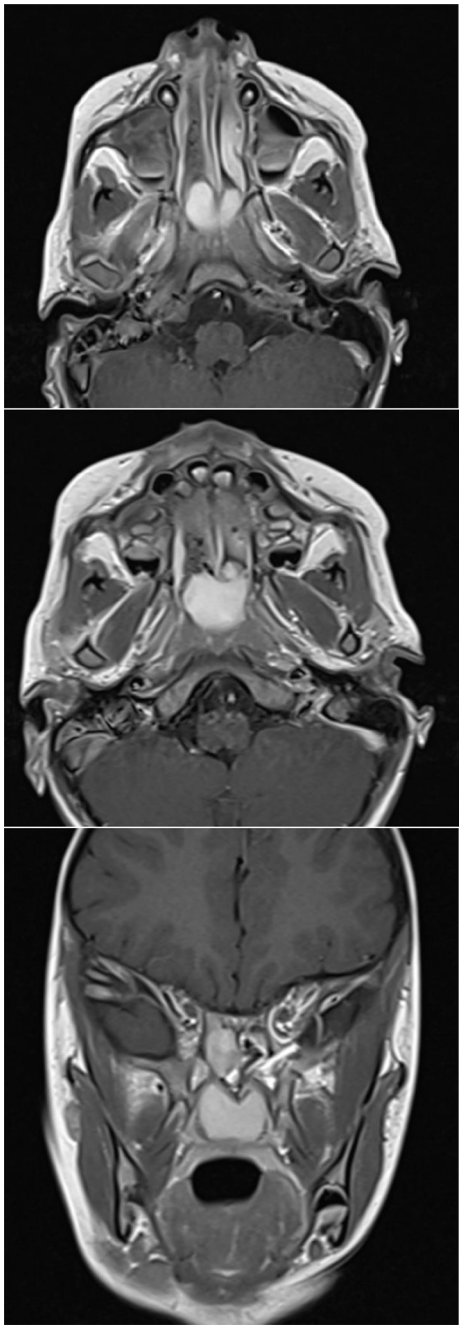

Fig. 2. Contrasted MRI. Embossing of the mass in nostrils and nasopharynx, in contrasted T1 sequences, is evidenced. The mass extends from the right to the left nostril through the coanal orifice.

3. Discussion

The extranasopharyngeal angiofibroma is found in the literature through case reports and some series, always showing its predominance in the male population, but with a greater number of reports in women compared to nasopharyngeal angiofibroma. In the review we made, thirty cases of extranasopharyngeal angiofibroma were found in women. In the year 2000, Huang et al. [5] collected fifty-five cases of extranasopharyngeal angiofibroma, of which fourteen patients were female, corresponding to 25.5% of the cases. None of them were originated in the nasal septum mucosa. The age range was between 14 and 78 years, with an average of 34.