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Intraosseous cavernous hemangioma: A rare nasal tumour

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Intraosseous cavernous hemangioma: A rare nasal tumour

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Abstract

The nasal cavity harbors a wide variety of benign and malignant neoplasms. Benign neoplasms include those arising in epitelial and soft tissues. Hemangioma is an infrequent neoplasm of the nasal cavity, mostly arising in the mucosa and rarely in the bone. We report a case of an intraosseous cavernous hemangioma arising from the nasal floor in a 51 years old woman.

Introduction

Hemangioma is a benign vascular tumor that usually arises from soft tissues[1,2]. However, it may arise from bone, in which it is designed intraosseous hemangioma[1,3]. The latter represents about 0.7% of all primary bone tumors and most often is located in the skull and vertebral column. Intranasal location is extremely rare[1, 3, 4].

Case Report(s)

A female patient, 51 years old, was referred for ENT consultation with a 5 year history progressive chronic nasal obstruction. Patient had no epistaxis, rhinorrhea, headache or anosmia. Nasal endoscopy showed a hard mass occupying both nasal cavities, envolving the posterior half of the septum. The mass was bony hard and covered with intact and nonhypervascularyzed mucosa. CT scan showed a large mass with regular borders, with areas of bone density and heterogeneous aspect, originating in the horizontal lamina of the maxilla, with about 4x3x3 cm located in the posterior half of the nasal cavities.Â MRI showed no bone erosions or invasion of surrounding tissues.

The suspicion of possible fibrous bone formation was raised (Figure 1). The patient underwent surgical treatment. The lesion wasremoved transnasally, through endoscopic surgery, preserving the anterior half of the nasal septum. Macroscopically the lesion had smooth surface, non-hemorrhagic, with trabecular bone consistency. It was found that the lesion was inserted along the floor of the right nasal cavity, and after its origin removal, the mucosa was repositioned and preserved. Histological examination of the surgical specimen revealed cavernous hemangioma composed of vascular spaces of thin wall, lined by endothelial cell layer containing blood, scattered among the trabecular bone, and the definitive diagnosis was intraosseous cavernous hemangioma (Figure 2). The postoperative period was uneventful, and the patient was discharged after three days. After 2 weeks, examination showed only crusting in the surgical cavity. Over the 6 months after surgery the patient remained without nasal or oropharyngeal complaints, with integrity of the nasal floor mucosa. CT scan after 6 months (Figure 3) and nasal endoscopy after 1 year of surgery (Figure 4) showed no signs of recurrence.

Discussion

In the head and neck region, hemangiomas arise most commonly in the soft tissues, such as skin, mucosa, muscles and glands, and in the nasal cavity they can arise in the septum, lateral wall and vestibule[1,2,4]. Intraosseous hemangiomas may originate in the maxillofacial skeleton - jaw, cheekbone and nasal bones - but intranasal location is very rare[4, 5, 6]. In the literature, the authors found similar cases at the inferior turbinate, middle turbinate, *crista galli*, vomer, ethmoid and maxillary sinus[1,2,3,7].

Hemangiomas can be classified as cavernous, capillary or mixed. The capillary and cavernous types are classified according to the vascular caliber. The intraosseous hemagiomas are most commonly of cavernous type[1,3].

Intraosseous hemangiomas are benign slow growing tumors, more common in women between 4th and 5th decades of life, in contrast to hemangiomas of soft tissues that are more common in childhood[1,2,4]. Bleeding is not common, and nasal obstruction is the main due to mass effect, as in the present case[1,2]. Pathogenesis remains unclear but has been suggested that its origin can be related to nasal trauma[1,2,3,4].

The endoscopic Â appearance of the tumor is often a hard consistency mass covered withÂ non-haemorrhagicÂ intact mucosa[1,3,4].

CT scan is the image method of choice for evaluation of these tumors. It usually presents as a mass of regular boundaries, with honeycomb and soap bubble appearance, due to the cavernous spaces surrounded by trabecular bone[1,2,3]. The periosteum remains intact, unlike osteogenic sarcomas, and generally no reactive sclerosis in margins is seen[6,8]. MRI can be useful to assess the extent to soft tissues and also vascularization pattern[2]. Angiography shows an increase of vascularization in the tumor area with feeding arteries but no venous drainage[4,6]. This exam may be useful in large tumors[6].

Diagnosis of such tumors can be difficult, and is usually given by histopathological examination of the surgical specimen. As so, imaging features and the macroscopic aspect of the lesion are fundamental to the suspected diagnosis and surgical planning[1, 4, 8].

Thus, treatment of these tumors is surgical and total excision from its origin is recommended[1, 2, 3, 5]. Â The surgical technique to employ depends on the location of the tumor. Open techniques like midfacial degloving, lateral rhinotomy, transpalatal, transantral and Le Fort I can be used[2], but the endoscopic transnasal approach is the technique of choice for intra-nasal tumors[2,3].Â In this case, total excision was possible endoscopically, without major bleeding and no functional defect.

Macroscopically these tumors are of trabecular bone filled by vascular tissue, covered with intact mucosa. The trabeculae are the result of osteoblastic and osteoclastic bone remodeling in response to the stimulus caused by vascular spaces[8].

The role of preoperative embolization is controversial[9]. The vascular supply is not well defined and intraoperative bleeding is scarce according to reports in the literature[1,2,4], as in the case presented. Based on these findings, several studies suggest that preoperative embolization is not required[1, 2,3,9].

When surgical removal is complete, the prognosis is excellent, and recurrence is rare[1,6].

Other therapeutic options described in the literature are radiation therapy, sclerotherapy and embolization[1,4]. Radiotherapy prevents tumor growth but doesnâ€™t reduce its size[2]. Such therapeutic options are reserved for palliative inoperable cases[3,4,9].

In this case, despite the volume of the lesion, endoscopic approach was possible. A complete excision was made, with no functional defect, restoration of nasal patency and no signs of relapse after 6 months.

Conclusion

Intraosseous cavernous hemangiomas are extremely rare nasal tumours, and definitive diagnosis is histological[1, 4, 8]. As such, this entity should be considered in cases of osteofibrous aspect tumours with the imaging features of CT scan and macroscopic appearance[1, 2, 3]. Complete surgical excision may be possible endoscopically with good functional results, and the recurrence is extremely rare when excision is total[1, 6].

Abreviations

CT - Computed Tomography

MRI - Magnetic Resonance Imaging

Important note

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