Endoscopic endonasal resection of cavernous hemangioma of the palate

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Objective

To demonstrate resection of favorable palatal hemangiomas can be achieved via an endoscopic endonasal technique, thus avoiding transpalatal approaches and risk of oronasal or oroantral fistulas.

Background

The hard palate is a unique anatomic location. It consists of mucosa that is rich with minor salivary glands that is closely adherent to the palate process of the maxilla and horizontal plate of the palatine bone. Neoplasms of the hard palate are rare and may display different characteristics and histologic findings. Whether benign or malignant, the therapy of choice is surgical excision. Almost all cases are performed through a transoral approach. Primary interosseous cavernous hemangiomas of the craniofacial bones are rare. Intermittent cavernous hemangiomas (IH) are usually asymptomatic. IH presents as a slow-growing mass, which can cause discomfort and spontaneous bleeding. IH has a 3:1 female predilection and most commonly presents in the 4-5th decade. Here we report a case of a 56-year-old woman who underwent an endoscopic endonasal resection of a cavernous hemangioma of the hard palate.

Methods

A 56-year-old female was found to have a submucosal palatal lesion. CT scan showed a lobulated enhancing solid mass in the left anterior aspect of the hard palate. MRI showed a lesion with bony destruction and expansion towards the left maxillary sinus floor (Figure 1). Purely endoscopic endonasal approach and resection was performed.

Surgery was performed with a 0, 45° and 70° endoscopes. A septal mucoperichondrial flap was elevated. Exposure of the nasal cavity floor was achieved with elevation of the inferior turbinate. (B) Mucosal flap elevation over the maxillary sinus. (D) Nasal endoscopy performed in the office demonstrating complete resection of the lesion. Observe there is no communication between the inferior meatus and the nasal cavity. At 3-month follow-up the patient had complete healing of the surgical bed. There were no complications of inferior turbinate, inferior meatus or palatal fistula. No obstruction of the nasolacrimal duct and epiphora. She underwent a 5 month post-operative MRI which showed complete mucosalization of the surgical area (Figure 3).

Conclusions

Palatal neoplasms are rare and the histopathology can be varied. If feasible, most advocate complete surgical resection to prevent recurrence of both benign and malignant lesions. Most lesions of the palate are resected through a transoral approach. Interosseous cavernous hemangiomas of the palate are a rare entity and have not been reported in the literature previously.

CT is an optimal imaging technique for the diagnosis of intraosseous hemangiomas, it can demonstrate characteristic findings or an expansile mass with radiating trabeculae(Fig 1 C,D). MRI can be helpful as it is better than CT in its ability to evaluate vascularity and depth of invasion into soft tissue planes (Fig 1 A,B). The endoscopic endonasal approach is feasible to achieve complete resection of favorable palatal lesions. Avoiding a trans-palatal oral approach may carry less risk of oronasal or oroantral fistulas compared to the traditional transoral palatal approach.

Results

Complete resection of the palatal cavernous hemangioma was achieved entirely via an endoscopic endonasal approach with excellent visualization of the hard palate and without entry into the oral cavity (Fig 2). Bleeding was easily controlled with electrocautery with acceptable blood loss intra-operatively. Absorbable packing was used to place pressure on the mucosal flap against the reconstructed area and to facilitate healing. Pathology confirmed the biopsy report, demonstrating bone and hyaline cartilage with prominent vascularity.

One month post-operative nasal endoscopy showed complete mucosalization of the surgical area, inferior meatus and inferior turbinate. At 3-month follow-up the patient had complete healing of the surgical bed. There were no complications of inferior turbinate, inferior meatus or palatal fistula. No obstruction of the nasolacrimal duct and epiphora. She underwent a 5 month post-operative MRI which showed complete resection of the lesion without evidence of recurrence. MRI also showed no evidence of any fistula with complete separation of the maxillary sinus and the nasal cavity in the surgical area(Fig 3).