Angiofibroma is a rare benign tumor most commonly arising in the nasopharynx. It represents less than 1% of all nasopharyngeal tumors (1) and most commonly arises along the posterolateral wall of the nasopharynx at the opening of the pterygopalatine canal behind the sphenopalatine ganglion (2). The primary demographic is males ages 7-25. Because of the association with this location and age group, the tumor is frequently referred to as juvenile nasopharyngeal angiofibroma. The most common presenting symptoms are epistaxis and nasal obstruction. On physical exam, a pink or blue mass is usually visualized bulging into the nasopharynx. Given the high vascularity of this tumor, attempt at biopsy often leads to profuse bleeding. Despite the benign pathology of angiofibromas, they can be destructive locally. Imaging is helpful in diagnosis as well as for surgical planning. Computed tomography shows the extent of a tumor, especially with regard to intracranial, infratemporal or orbital involvement. Pre-operative angiography is useful to identify the blood supply to a tumor, at which time embolization of feeding vessels can be performed. Primary treatment is surgical resection. Approaches for resection are varied and depend on the extent of disease. Radiotherapy may be of use in recurrent, large or unresectable tumors (1).

Angiofibroma is a rare tumor presenting predominantly as a nasopharyngeal lesion in adolescent males. It more commonly seen in women and adults. They most frequently arise in the maxilla, followed by the ethmoid sinus. Only three prior cases arising from the middle turbinate have been reported (4). Nasopharyngeal angiofibromas are uncommon tumors. Primary extranasopharyngeal, or atypical, angiofibromas are even more rare and should be considered a distinct entity. These tumors are more likely to occur in women and adults. A review of 65 cases of extranasopharyngeal angiofibromas, 25.5% occurred in women and the mean age of presentation was 22 (4).

A review of 65 cases reported the maxilla to be the most common site of origin (25.5%), followed by the ethmoid (12.3%) (5). Less common sites of origin included the sphenoid sinus, nasal septum, inferior turbinate, cheek, conjunctiva, pterygomaxillary fissure, molar and retromolar area, ornganoid process, and palate. Other than cases of middle turbinate origin, no other sites of origin have been reported (4). Nasal obstruction, epistaxis and facial swelling are the most common presenting symptoms (6). However, symptoms can vary depending on the site of origin. Work-up is similar to that of nasopharyngeal angiofibroma and consists of CT scan or MRI after initial exam. Angiography is helpful to delineate blood supply and perform embolization prior to surgical resection if indicated. Surgical resection is the mainstay of treatment. Approach is guided by the size and location of the tumor. Radiotherapy is less commonly used than in nasopharyngeal angiofibromas (5).

CONCLUSIONS

Angiofibroma is a rare tumor presenting predominantly as a nasopharyngeal lesion in adolescent males. Uncommonly, this tumor presents in women, adults or in extranasopharyngeal locations. It should be included in the differential diagnosis of atypical nasal masses. These patients should have close follow-up given the propensity for recurrence.

REFERENCES


Image 1. Sinus computed tomographic coronal image of left nasal cavity mass.

Image 2. Sinus computed tomographic axial image of left nasal cavity mass. Nasopharynx is not involved.

Image 3. Histopathology demonstrating numerous thin walled vessels within a fibrous stroma.

Image 4. High power view of thin walled vessels within a fibrous stroma, consistent with angiofibroma.