Retropharyngeal Lipoma Presenting as Airway Obstruction

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ABSTRACT

The retropharyngeal space is a relatively uncommon space to harbor a primary neoplasm with less than 1% of head and neck primary neoplasms arising from this area. Swelling in this region is most often secondary to lymphadenopathy, infection or spread from a nearby tumor. However, when a space occupying lesion does present in this area the patient may present with symptoms of airway obstruction. Obtaining an airway may become anatomically difficult depending on the size of the lesion. We present a case of a retropharyngeal lipoma in 64 year old female requiring emergent operative airway intervention secondary to airway obstruction.

CASE REPORT

A 64 year old female presented to the emergency department complaining of shortness of breath. This patient stated that she has had some progressive dyspnea and dysphagia for approximately 6 months. Physical examination revealed an afebrile female with tachypneic respirations and no stridor. Flexible fiberoptic exam revealed an obstructive submucosal process emanating from the retropharynx extending to the level of the epiglottis obscuring the endolarynx. Contrast enhanced computed tomography displayed a well encapsulated low density retropharyngeal mass (Figures 1-3).

The patient was quickly brought to the operating suite where flexible fiberoptic intubation attempted, but visualization was obstructed secondary to the mass. Emergent tracheotomy was then performed after the patient underwent rapid respiratory decompensation.

The patient underwent transcervical resection of the mass. Histological exam confirmed that this was a lipoma. She was decannulated 6 weeks later with return to normal swallowing and respiratory function.

Figure 1. Axial and sagittal contrast enhanced computed tomography of the neck displays a 8.3 x 4.4 cm low-density retropharyngeal mass.

Figure 2. Axial contrasted computed tomography after resection of the tumor.

Figure 4. Coronal T2 weighted MRI revealed low signal intensity in comparison.

DISCUSSION

Lipomas are benign slow growing neoplasms of mesenchymal origin that may appear in the retropharyngeal space. The retropharyngeal space is defined as the space posterior to the pharyngeal mucosa and anterior to the prevertebral fascia. Primary tumors of this location are rare. The space contains lymph nodes along with a small amount of fat, which these lesions are thought to stem from. Retropharyngeal lipomas most often originate from the infrahyoid retropharyngeal space.1

The clinical course can be insidious. Subtle dysphagia, shortness of breath and obstructive sleep apnea have been described as presenting signs. Symptoms may be present for months to years and have a slow progression in severity. Furthermore, the retropharyngeal and parapharyngeal spaces provide a large area for a tumor to spread without notice to the patient. As is the case presented here, this may not prompt medical treatment until acute airway obstruction is encountered.

The radiographic characteristics of retropharyngeal lipomas are typical of lipomas in other anatomic locations. They appear as a homogenous low attenuation mass with no clearly defined capsule that resembles fat, with a density of -50 to -150 Hounsfield units. 3,4 Heterogeneity on CT may indicate a liposarcoma, while an irregular interface may suggest an infiltrating lipoma. MRI, will reveal a hyperintense lesion on T1 that does not enhance with gadolinium. MRI may be useful to identify a liposarcoma, as thickened septa, associated nonadipose masses, prominent foci of high T2 signal and prominent areas of enhancement are associated with this entity.5

Histologic diagnosis in some circumstances may be necessary to differentiate lipoma from liposarcoma. Complex capillary networks, increased cellularity, lipoblasts, and neovascular stroma are present in liposarcoma and can alert the practitioner to a mass that needs to be more urgently removed. Fat cells may be all that is yielded on FNA and can not be differentiated from normal fat until final removal of the lesion.4

Treatment is surgical excision and is accomplished through an intraoral or transcervical approach, depending on the extent of the lipoma. Preoperatively, if an infiltrating lipoma is suspected, wide local excision that includes a cuff of prevertebral musculature should be undertaken. The rate of recurrence of an infiltrating lipoma, without WLE, is as high as 62.5%.1,5

In the case of acute airway compromise, the obstructing lesion may be quite large. This may complicate the ease of obtaining a secure airway. Awake flexible fiberoptic intubation may be attempted initially; however the practitioner should be prepared for emergent tracheostomy if the airway can not be secured through intubation. Thus, we find the operating room to be the safest environment to manage this potentially challenging situation.

REFERENCES