Phrenic Nerve Neurofibroma
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History
Adult with dysphagia and neurofibromatosis.

Diagnosis
Phrenic Nerve Neurofibroma

Discussion
Fibers from the 3rd, 4th and 5th cervical nerves join to form the phrenic nerve. It descends obliquely along the anterior scalene muscle, deep to the prevertebral layer of deep cervical fascia between the subclavian artery and vein before entering the mediastinum. The phrenic nerves provide motor innervation to the diaphragm, sensory innervation to the central intrathoracic and peritoneal surfaces of the diaphragm, and sensory innervation of the pericardium and mediastinal pleura (mediating pain to the neck and shoulder). Manifestations of phrenic nerve disease include diaphragmatic paralysis with elevation or persistent hiccups. Primary tumors of the phrenic nerves are rare but are seen in neurofibromatosis. Metastatic disease involvement from primary lung cancer is more common.

Findings
MR-Axial and coronal T2 and axial T1 and post-gadolinium T1 images of the neck show an ovoid mass anterior to the right scalene muscle with distortion of the larynx.

Reference

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