Neurofibroma of the Spinal Accessory Nerve

J McClenathan

Citation

J McClenathan. *Neurofibroma of the Spinal Accessory Nerve*. The Internet Journal of Surgery. 2012 Volume 28 Number 2.

Abstract

Neurogenic tumor is an unusual cause of a mass in the posterior triangle of the neck. Herein, we report a patient with a neurofibroma of the spinal accessory nerve.

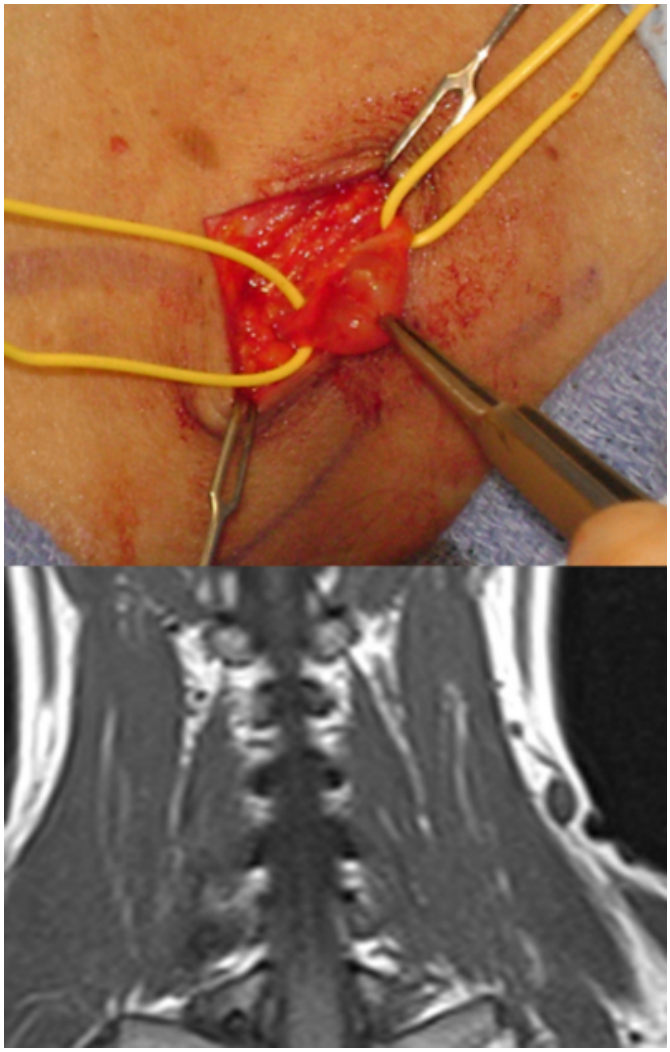
CASE REPORT

A 39-year-old woman was evaluated for treatment of a soft-tissue mass in the posterior triangle of the left neck. She was in good health otherwise. The mass was present for two years. She had previously had excision of several cutaneous and subcutaneous scalp lesions, which were shown to be neurofibromas. There was no family history of neurofibromatosis. Cytogenetic analysis for neurofibromatosis six years earlier was not diagnostic.

The neck mass was tender. It was mobile only in the antero-posterior direction. An MRI of the neck (Figure 1) was performed and a surgical procedure was done.

Figure 1

Figure 1: Neurofibroma of the spinal accessory nerve, intraoperative view and MRI



DISCUSSION

The majority of masses in the posterior triangle of the neck are dermal cysts, lymph node pathology, lipomas or

branchial anomalies. Lymph node pathology includes reactive adenitis, lymphoma and metastatic tumor.

The spinal accessory nerve traverses the posterior triangle of the neck before innervating the trapezius muscle. Nerve sheath tumors of the accessory are exceedingly rare. Peripheral nerve sheath tumors are divided into schwannomas and neurofibromas. Schwannomas of the accessory nerve were reviewed by Ahmadi-Yazdi. Of the twelve patients reviewed, only one was located in the posterior triangle of the neck.

Neurofibromas of the spinal accessory nerve may be even less common than schwannomas. Fabrizi reported a solitary neurofibroma of the accessory nerve in the posterior triangle of the neck. The patient did not have neurofibromatosis. The mass was eccentric to the nerve and removal of the mass did not cause a neurologic deficit.

In our patient, the MRI confirmed presence of the mass and showed that it was attached to a major nerve structure. A 1-cm tumor was eccentric to the nerve and it was dissected from the nerve. A nerve stimulator confirmed nerve function as the tumor was dissected. Histological evaluation and immunohistochemical stains confirmed the tumor as a neurofibroma.

Surgeons who evaluate masses in the posterior triangle of the neck should be aware that nerve sheath tumors are seen in this location. Tenderness, a positive Tinelâ™s sign, and mobility only in the transverse direction should raise suspicion for a neurogenic tumor. MRI can show that the mass involves a large nerve. FNA was not used in our patient but can confirm the diagnosis of a neurogenic tumor.

In a review of 237 patients with peripheral neurofibromas, Kim concluded that most peripheral neurofibromas can be safely removed without sacrifice of the nerve.

References

1. Ahmadi-Yazdi C, Habashi S: Schwannoma of Accessory Nerve: A case report. The Internet Journal of Otorhinolaryngology; 2006 (4): 2.
2. Fabrizi AP, Poppi M, Giuliani G, Gambari PI, Gaist G: Benign solitary nerve sheath tumors of the spinal accessory nerve in the posterior triangle of the neck. Report of two cases. J Neurosurg Sci.: 1992; 36(4): 247-50.
3. Kim DH, Murovic JA, Tiel RL, Moes G, Kline DG: A series of 397 peripheral nerve sheath tumors: 30-year experience at Louisiana State University Health Sciences Center. J Neurosurg; 2005; 102(2): 246-55.

Author Information

James H. McClenathan, MD
Associate Professor of Clinical Surgery, University of Arizona Health Network South Campus