

Schwannoma of Descendence Hypoglossi Nerve

Chetan V Ghorpade, Ravi P Deo, Raghuji D Thorat, Jayant K Watve

ABSTRACT

We are reporting a case of 30-year-old female with asymptomatic left sided neck mass who underwent surgical excision. She was diagnosed as having a neurilemmoma of left descendence hypoglossi nerve on histopathological examination. The review of available literature has shown it is a rare occurrence.

Keywords: Parapharyngeal space tumor, Neurilemmoma, Descendence hypoglossi nerve.

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INTRODUCTION

Neurilemmoma is benign tumor arising from Schwann cells. It is well-encapsulated tumor, which forms single, round or fusiform firm mass on the course of one of larger nerves. The commonest site is vestibulocochlear nerve followed by posterior mediastinum. In neck, it usually arises from vagus.

This is a rare case with neurilemmoma arising from descendence hypoglossi nerve in PPS.

CASE REPORT

A 30-year-old lady presented to OPD with swelling in left anterior aspect of neck since 3 years. Lesion was noticed by relative 3 years ago when it was of groundnut size. Slowly swelling increased without pain to attain present size of lemon. Patient did not have difficulty in swallowing, cough or change in voice. There were no symptoms s/o Horner's syndrome. There was no h/o palpitation, flushing or hypertension. No other relative had similar swelling present or operated. There was no h/o altered tongue movements, sleep apnea, weight loss, fever facial weakness.

On examination oral cavity, nose, ear were normal. Bilateral true cord movement was normal without any evidence of aspiration on indirect laryngoscopy examination. In face and neck examination, we found left level II ill-defined mass along anterior border of sternomastoid extending from infra-auricular region to cricoid cartilage, almost $6 \times 6 \times 4$ cm in size, soft, compressible, nontender, mobile in all directions and free from overlying skin. It had diffuse margins and anterior border of sternomastoid was not distinctly palpable. There

were transmitted pulsations in lower aspect of the swelling. There were no signs of inflammation.

Radiological evaluation confirmed clinical findings CT scan of the neck revealed soft tissue lesion in left anterior aspect of neck close to carotid sheath. A provisional diagnosis of vagal neurilemmoma was made.

Patient was planned for excision of mass under general anesthesia with informed consent regarding change in voice with left cord palsy if tumor is arising from vagus or Horner's syndrome if it has origin from cervical ganglion. In case of vagal neurilemmoma, thyroplasty type I in same sitting was explained to patient.⁴ Patient was positioned supine with neck extended to right side (Fig. 1). Horizontal incision in upper cervical crease on left side was planned. Subplatysmal flap was raised (Fig. 2). Greater auricular nerve, external jugular vein, facial vein, tail of parotid, marginal mandibular and



Fig. 1: Position of patient



Fig. 2: Subplatysmal flaps raised

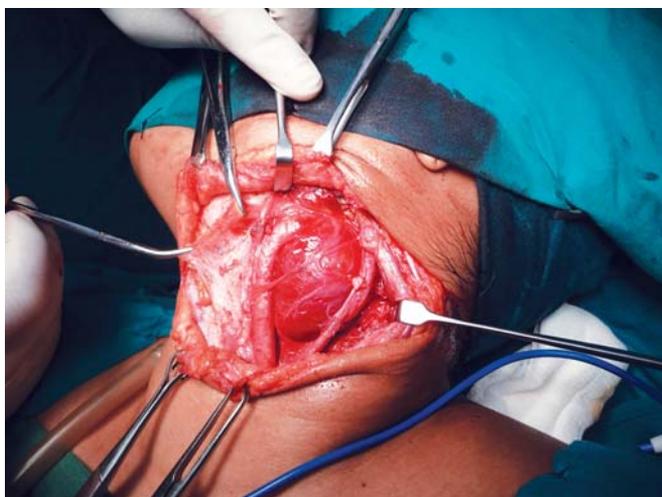


Fig. 3: Tumor with carotid vessel and strap muscles

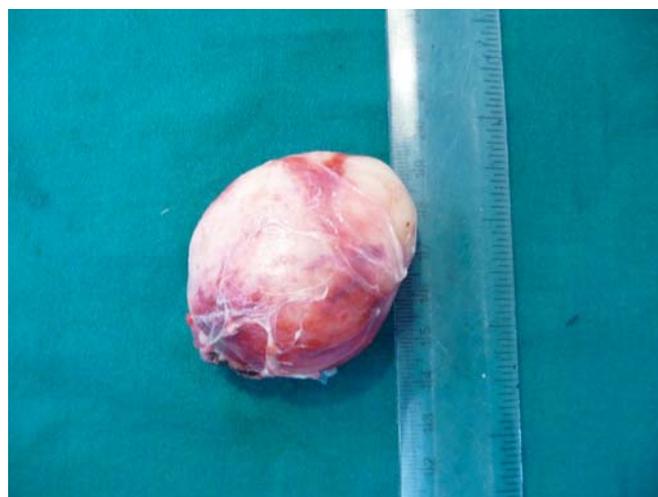


Fig. 6: *En masse* tumor removal

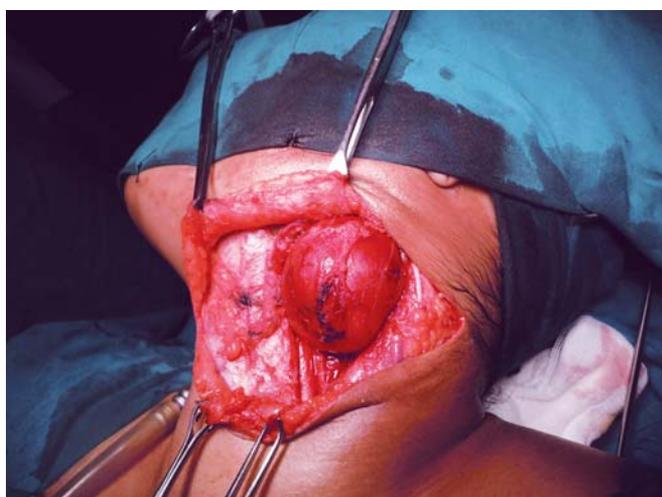


Fig. 4: Encapsulated tumor delivered



Fig. 5: Tumor removed without trauma to surrounding structures

cervical branch of facial nerve were identified and preserved (Fig. 2). Spinal accessory nerve and hypoglossal nerve were identified and preserved. Carotid sheath was explored to skeletonise common carotid artery, internal carotid artery,

external carotid artery, internal jugular vein and vagus nerve (Fig. 3). Tumor was encapsulated and arising from descendence hypoglossi nerve, (Fig. 4) removed in toto along with involved nerve meticulously without inadvertent trauma to other vital structures (Fig. 5). Drain was fixed and incision closed in layers.

The examination of gross specimen revealed a mass of 6 × 6 cm white encapsulated mass (Fig. 6) whose histopathological examination showed long slender cells with elongated nuclei arranged in palisade and whorls. And diagnosis of neurilemmoma was made postoperatively.

Postoperative recovery was uneventful. There was neither cough on swallowing nor change in voice after surgery. She had no recurrence after close follow-up for 1 year.

DISCUSSION

Parapharyngeal space has complex anatomy with diverse contents giving rise to wide variety of tumors. Surgery PPS is technically challenging in view of three-dimensional anatomy. Parapharyngeal space is inverted pyramid with its base at skull base and apex at the hyoid bone. The lateral boundary is mandible and medial boundary is buccopharyngeal fascia with constrictor muscles of pharynx. The fascia of tensor veli palatini muscle runs from styloid process to lateral pterygoid plate and separates pre- and post-styloid compartments of PPS.¹ The tumors in prestyloid compartment are usually pleomorphic adenoma from deep lobe of parotid gland while in poststyloid compartment they have almost neurogenic origin. The most common poststyloid PPS tumors are paragangliomas including carotid body tumor and glomus vagale.² Neurilemmoma arising from vagus or superior cervical ganglion may also occur in this area.

In series of 152 patients of parapharyngeal tumors at University of Pittsburgh, paraganglioma was commonest

(45.3%) lesion and only 7 patients (4.6%) had neurilemmoma arising from vagus or superior cervical ganglion.

Identification of various vital structures in parapharyngeal space is of paramount importance. With the help of CT scan, accurate position of the tumor along with its vascularity can be defined.² It helps us to plan surgical incision, need of vascular surgeon (in grade III carotid body tumor) and inevitable postoperative complication like vocal cord palsy or Horner's syndrome.² In above mentioned case nerve of origin and meticulous surgical technique has helped in smooth complication free recovery.³

CONCLUSION

Radiological imaging has given third eye to surgeon to peep in parapharyngeal space preoperatively. Even though paragangliomas are common in poststyloid compartment followed by neurilemmoma of vagus, this was a rare case of neurilemmoma from decedence hypoglossi nerve. Complete removal of tumor cures patient, but warrants clear identification of other vital structures and avoiding unnecessary injury to these structures.

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ABOUT THE AUTHORS

Chetan V Ghorpade (Corresponding Author)

Assistant Professor, Department of ENT, RCSM Government Medical College and CPR Hospital, Kolhapur, Maharashtra, India
e-mail: chetanent1@gmail.com

Ravi P Deo

Consultant, Department of Head and Neck Surgery, BGS Global Hospital, Bengaluru, Karnataka, India

Raghuji D Thorat

Professor, Department of ENT, RCSM Government Medical College and CPR Hospital, Kolhapur, Maharashtra, India

Jayant K Watve

Consultant, Department of ENT, Aster Adhar Hospital, Kolhapur Maharashtra, India