Neck Masses Originating From The Carotid Sheath: Challenges in Diagnosis

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Introduction

- Carotid body tumors (CBT) and vagal schwannomas (VS) pose a unique diagnostic challenge
- Tumor origin dictates surgical approach, pre-operative counseling, and post-operative outcomes.

Case Presentation

- A 38-year-old female presented with a sore throat and an incidental neck mass identified via CT.
- Flexible laryngoscopy and MRI reveals a large and pulsatile, submucosal mass splaying the right internal and external common carotid arteries.
- Preoperative embolization causes temporary asystole, which is resolved with glycopyrrolate suggesting vagal nerve involvement.
- Surgical exploration shows a tumor extending to the skull base and involving the right vagus nerve.
- Frozen pathology excluded paraganglioma but suggested a spindle cell neoplasm, with vagal schwannoma not ruled out.
- Postoperatively, the patient experienced dysphagia, dysphonia, and impaired tongue mobility that fortunately resolved with time.

Pt complains of a sore throat

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Imaging shows large neck mass with nonspecific origin within carotid sheath

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Pt experiences temporary asystole during pre-op embolization (resolved with glycopyrrolate)

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Vagal nerve origin confirmed via surgical exploration. Tumor removed.

Figure 1) Flexible fiberoptic laryngoscopy reveals pulsatile mass narrowing the oropharyngeal inlet

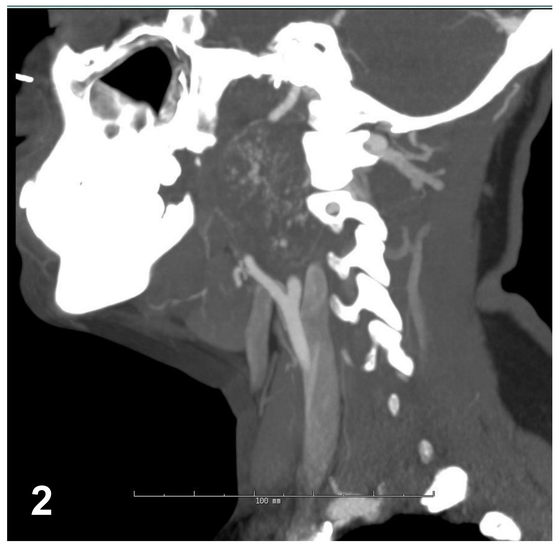

Figure 2) Abnormal CT of right side of neck displaying large mass splaying the internal and external carotid arteries

Conclusions

- Neck masses remain challenging to diagnose preoperatively.
- Asystole during embolization provided a diagnostic clue.
- Risks, benefits, and predictive power of pre-operative embolization should be studied.
- Multidisciplinary approach for complex neck masses enhances patient outcomes.

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