

Introduction

- **Granular cell tumors (GCTs):** Rare benign neoplasms first described in 1926, named for their granular cytoplasm (abundant intracytoplasmic lysosomes)
- **Immunohistochemistry (S100, NSE):** supports Schwann cell origin¹
- **Epidemiology:** Most common in 3rd decade, higher frequency in women and African Americans²
- **Presentation site:** ~50% arise in head and neck, most commonly tongue; also documented in skin/subcutaneous tissue
- **Laryngeal involvement:** Accounts for 3–10% of reported cases¹
- **Pharyngeal GCTs:** Extremely rare — only two prior cases in the literature
- **Gap in knowledge:** No published reports of pharyngeal GCTs managed with **transoral robotic surgery (TORS)**³
- **Case significance:** First known pharyngeal GCT resected via TORS, demonstrating feasibility and safety of a minimally invasive approach

Case Report

- 57-year-old male, never-smoker, with 8-month history of muffled voice, noisy breathing, inspiratory stridor, and 70-lb weight loss from dysphagia
- Exam and laryngoscopy showed large obstructive oropharyngeal/hypopharyngeal mass, vocal cords not visualized
- Pre-op contrasted computerized tomography: homogenous right lateral oropharyngeal mass (3.2 × 3.8 × 6.5 cm) compressing airway (**Figure 1 and 2**)
- Lesion contacted but did not invade right internal carotid artery
- Core needle biopsy: lymphoid tissue, spindle cells, pigmented histiocytes → suggestive of GCT
- Underwent TORS resection of right pharyngeal mass, pathology confirmed GCT with bland spindle cells, neural and granular features, no malignant features
- Immunohistochemistry: positive for S100 and SOX10
- Post-op: uncomplicated recovery, return to regular diet, no recurrence to date (**Figure 3 and 4**)

Figures

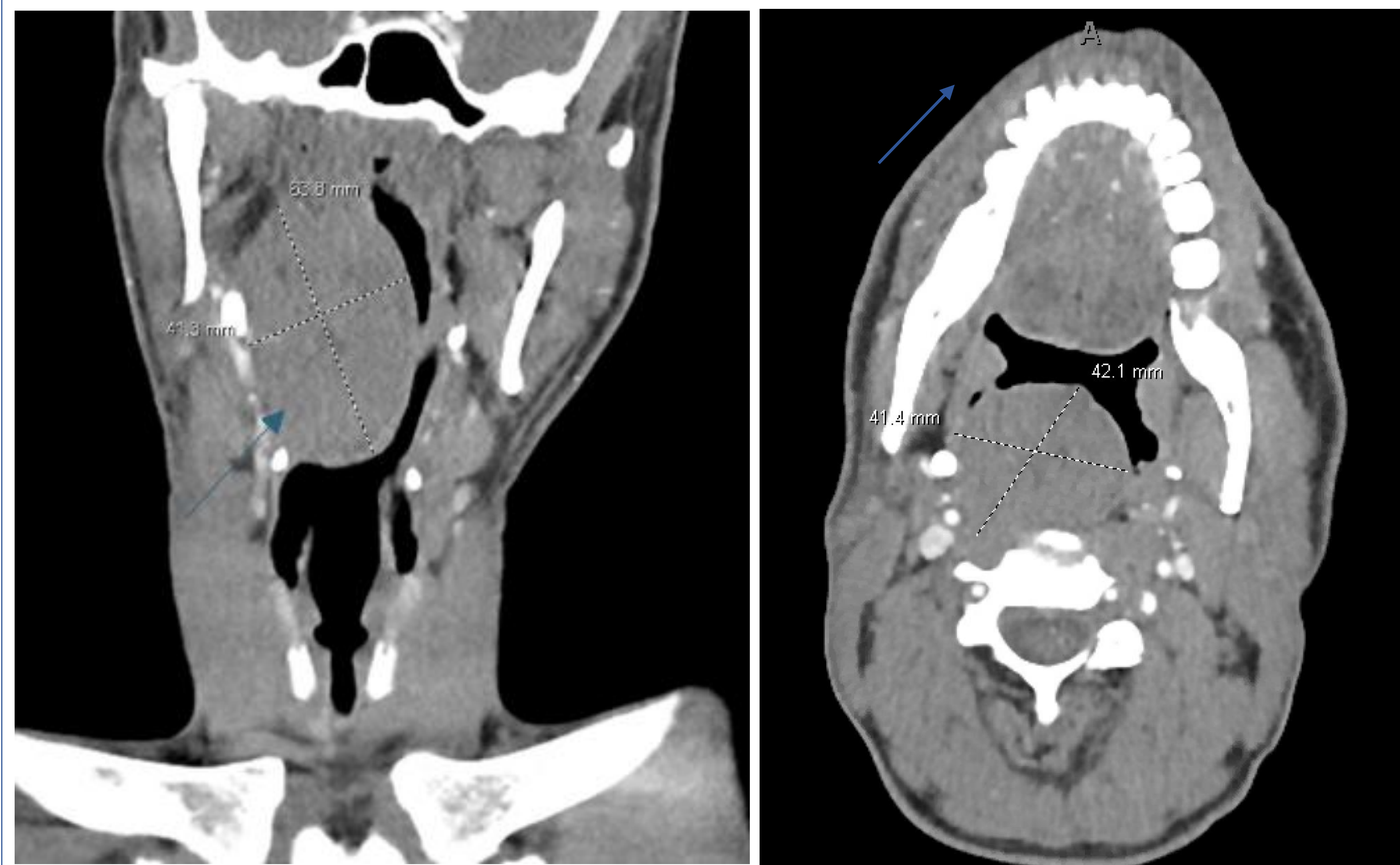


Figure 1 (coronal) and Figure 2 (axial): Contrast-enhanced CT demonstrating a large posterior pharyngeal wall GCT (blue arrow) prior to TORS, mass measures approximately 6.5 × 4.0 × 4.2 cm



Figure 3 (coronal) and Figure 4 (axial): Contrast-enhanced CT demonstrating no evidence of GCT recurrence 1 year post-operative

Discussion

- **Novelty:** First reported case of pharyngeal GCT resected via TORS
- **Tumor size:** ~75% of GCTs ≤2 cm⁴; this larger mass went undetected until obstructive symptoms developed
- **Rationale for TORS:** Chosen for lack of aggressive features, safe distance from carotid artery, and superior robotic visualization
- **Benefit of approach:** Avoided morbidity of open transcervical surgery while preserving postoperative swallowing function
- **Pathology:** Histology and immunohistochemistry (spindle cells, S100 positivity) critical to distinguish GCT from squamous cell carcinoma
- **Imaging role:** CT demonstrating non-invasiveness supports benign nature
- **Prognosis:** Malignant transformation is exceedingly rare (<100 reported cases)⁵; adjuvant therapy not indicated for benign GCT

Conclusions

- TORS is safe and effective for selected GCTs of the upper aerodigestive tract
- Feasibility depends on tumor accessibility and proximity to critical vascular structures
- Minimally invasive approach offers disease control while preserving postoperative function

Contact

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