

Poorly Differentiated Squamous Cell Carcinoma of the Regaud–Schmincke Type of the Posterior Pharyngeal Wall: Diagnostic Challenges and Pitfalls

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Case Report

Keywords: oropharyngeal carcinoma, squamous cell carcinoma, Regaud–Schmincke carcinoma, posterior pharyngeal wall, computed tomography, case report

Posted Date: October 8th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10195571/v1>

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Additional Declarations: No competing interests reported.

Poorly Differentiated Squamous Cell Carcinoma of the Regaud–Schmincke Type of the Posterior Pharyngeal Wall: Diagnostic Challenges and Pitfalls

Received: July 2, 2026

Abstract

Background: Oropharyngeal tumors may initially present with nonspecific inflammatory symptoms, leading to diagnostic delay. Large exophytic lesions of the posterior pharyngeal wall are uncommon and may clinically and radiologically mimic infectious or inflammatory conditions.

Case Presentation: We report the case of a 67-year-old male presenting with progressive dysphagia, intermittent dysphonia, and foreign body sensation in the throat. Initial clinical evaluation and histopathological examination suggested an inflammatory process. Contrast-enhanced computed tomography revealed a large polypoid mass arising from the posterior pharyngeal wall, extending to the left salpingopharyngeal fold and the hypopharynx, with craniocaudal extension of approximately 64 mm and significant airway narrowing. Repeat biopsy followed by surgical excision confirmed poorly differentiated oropharyngeal squamous cell carcinoma of the Regaud–Schmincke type with deep soft-tissue infiltration, including invasion of striated muscle and salivary gland parenchyma. Due to impending airway obstruction, protective tracheostomy was performed prior to surgery. The postoperative course was complicated by transient acute kidney injury, which resolved with conservative management. The patient subsequently completed adjuvant external beam radiotherapy and was successfully decannulated four months postoperatively. Follow-up imaging demonstrated no evidence of local recurrence or distant metastasis.

Conclusion: This case highlights the diagnostic challenges posed by exophytic oropharyngeal carcinomas presenting with inflammatory features and underscores the importance of cross-sectional imaging and repeat histopathological evaluation in patients with persistent or progressive pharyngeal symptoms.

Keywords: oropharyngeal carcinoma; squamous cell carcinoma; Regaud–Schmincke carcinoma; posterior pharyngeal wall; computed tomography; case report

1 Introduction

Oropharyngeal squamous cell carcinoma (OPSCC) represents a significant proportion of head and neck malignancies and typically presents with dysphagia, odynophagia, voice changes, or cervical lymphadenopathy [1]. Lesions arising from the posterior pharyngeal wall are relatively rare and may demonstrate atypical growth patterns, including prominent exophytic extension, which can obscure their malignant nature.

Such tumors may mimic benign or inflammatory conditions, particularly when surface necrosis and granulation tissue predominate. This increases the likelihood of false-negative biopsy results and diagnostic delay. Cross-sectional imaging—especially contrast-enhanced computed tomography (CT)—is essential for evaluating lesion extent, airway compromise, and surgical planning [5].

The Regaud–Schmincke carcinoma is a histological variant of poorly differentiated squamous cell carcinoma characterized by syncytial sheets of atypical epithelial cells embedded within a dense lymphoplasmacytic stroma and an absence of keratinization. This pattern is recognized for its aggressive biological behavior and potential to mimic lymphoma or a reactive inflammatory infiltrate on histopathological examination [3].

We describe a case of giant exophytic OPSCC of the Regaud–Schmincke type originating from the posterior pharyngeal wall that initially masqueraded as an inflammatory process, with the aim of highlighting the diagnostic pitfalls associated with this rare presentation.

2 Case Presentation

A 67-year-old male was admitted to the Department of Otorhinolaryngology with a several-week history of progressive dysphagia, intermittent dysphonia, and persistent foreign body sensation in the throat. Previous outpatient antibiotic therapy had produced no clinical improvement.

His medical history was significant for stage III arterial hypertension, ischemic heart disease with prior percutaneous coronary intervention of the left circumflex artery, chronic obstructive pulmonary disease (COPD), and a prolonged history of tobacco and alcohol use. No history of head and neck radiation was reported.

Oropharyngeal examination revealed a large polypoid mass arising from the posterior pharyngeal wall, extending to the left salpingopharyngeal fold and the hypopharynx, with near-complete obstruction of the oropharyngeal lumen. Flexible fiberoptic laryngoscopy demonstrated preserved bilateral vocal cord mobility. No palpable cervical lymphadenopathy was identified at the time of initial presentation. An initial biopsy specimen revealed nonspecific granulation tissue with no histological evidence of malignancy.

Contrast-enhanced CT of the head and neck demonstrated a large, heterogeneously enhancing polypoid mass arising from the posterior pharyngeal wall, measuring approximately 64 mm in craniocaudal extent and causing significant airway narrowing (Figs. 5–6). No bony erosion of adjacent cervical vertebrae was identified. CT of the thorax showed no evidence of pulmonary metastases or mediastinal lymphadenopathy.

In view of progressive airway compromise, a protective tracheostomy was performed prior to definitive surgery, also anticipating subsequent radiotherapy. Surgical excision of the tumor was then carried out. Intraoperatively, a large exophytic–infiltrative lesion with extensive necrosis was identified, involving the posterior oropharyngeal wall, the left salpingopharyngeal fold, and the hypopharynx. Complete surgical excision was achieved down to the prevertebral fascia.

Histopathological examination confirmed poorly differentiated squamous cell carcinoma of the Regaud–Schmincke type, with deep infiltration of surrounding soft tissues, including marked invasion of striated muscle fibers and salivary gland parenchyma (Figs. 1–4). Prominent intratumoral necrosis and hemorrhage were observed.

The postoperative course was complicated by transient acute kidney injury, which resolved with conservative management and intravenous fluid therapy. Following multidisciplinary tumor board evaluation, adjuvant external beam radiotherapy was recommended based on the tumor’s poor differentiation and infiltrative growth pattern. The patient completed the prescribed course of radiotherapy without significant adverse effects. At follow-up, clinical examination and cross-sectional imaging demonstrated no evidence of local recurrence or distant metastasis. The patient was successfully decannulated four months postoperatively.

3 Discussion

Exophytic growth patterns in OPSCC are uncommon and may obscure the malignant nature of the lesion, particularly in tumors of the posterior pharyngeal wall, where access for examination is limited and symptomatology may be nonspecific [4]. The present case illustrates how an exophytic carcinoma can simulate an infectious or inflammatory process both clinically and histopathologically.

False-negative biopsy results are a well-recognized pitfall in head and neck oncology and may occur when the superficial portion of the lesion consists predominantly of necrotic debris and reactive granulation tissue, masking the underlying neoplasm [4]. In this case, the initial biopsy was non-diagnostic, and the correct diagnosis was established only after repeat histopathological assessment of a deeper specimen.

The Regaud–Schmincke variant of squamous cell carcinoma is characterized by syncytial tumor cell clusters embedded within a dense lymphoplasmacytic stroma, without overt keratinization [3]. This histological pattern can closely resemble lymphoma or a reactive inflammatory infiltrate, further compounding the diagnostic challenge. Immunohistochemical analysis demonstrating cytokeratin positivity may be required to confirm epithelial differentiation in ambiguous cases.

Cross-sectional CT imaging played a pivotal role in this case by delineating the true extent of the mass, identifying airway compromise, and excluding bony erosion and distant metastasis [5]. The imaging findings prompted timely surgical planning and the decision to perform a protective tracheostomy before general anaesthesia and tumor resection.

This case underscores the necessity of maintaining a high index of suspicion for malignancy in patients with persistent pharyngeal symptoms that fail to respond to conservative measures. It emphasizes the value of a multidisciplinary approach—including repeat biopsy, advanced cross-sectional imaging, and tumor board review—in achieving a timely and accurate diagnosis.

4 Conclusion

Giant exophytic squamous cell carcinoma of the posterior pharyngeal wall is a rare and diagnostically challenging entity. Persistent symptoms, atypical lesion morphology, and non-diagnostic initial biopsies warrant thorough cross-sectional imaging and repeat histopathological assessment. Early recognition, multidisciplinary evaluation, and timely intervention are essential to prevent diagnostic delay and optimise patient outcomes.

Declarations

Funding This research received no specific funding from any public, commercial, or not-for-profit agency.

Ethics and Consent Written informed consent was obtained from the patient for the publication of this case report and any accompanying images. The study was conducted in accordance with the principles of the Declaration of Helsinki. This case report was prepared in accordance with the CARE guidelines.

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Figures

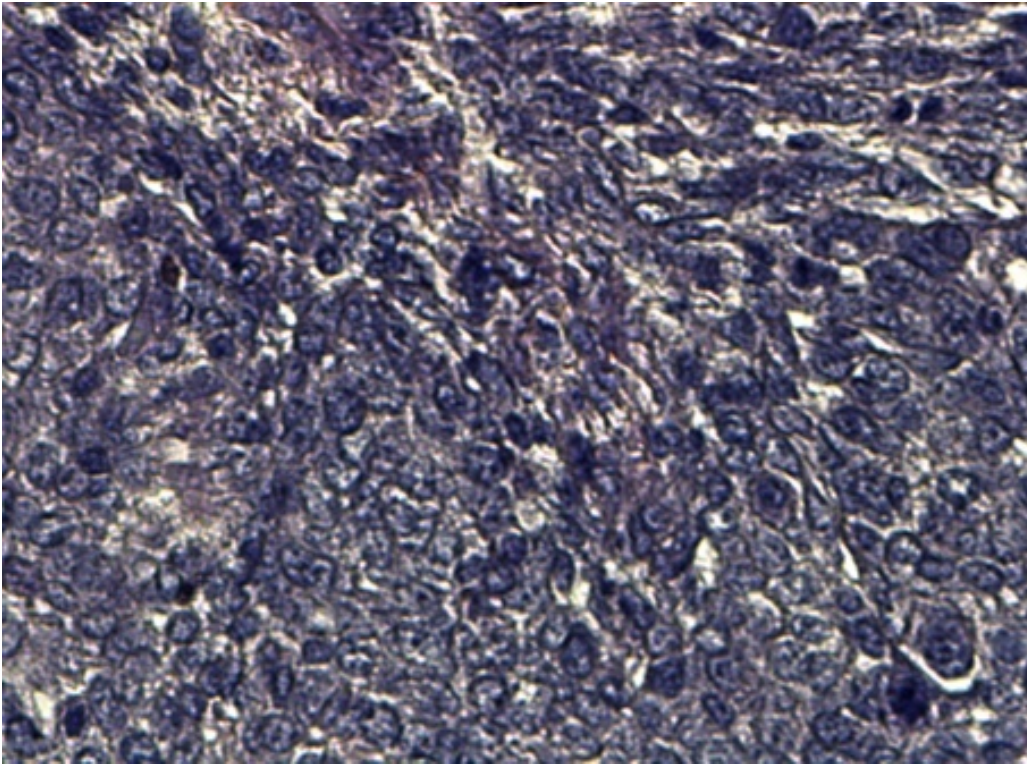


Figure 1: Histopathological image demonstrating poorly differentiated squamous cell carcinoma of the Regaud–Schmincke type. Syncytial sheets of atypical epithelial cells with indistinct cell borders, vesicular hyperchromatic nuclei, and a high nuclear-to-cytoplasmic ratio. A prominent lymphoplasmacytic stromal infiltrate partially obscures the neoplastic component. No keratinization is identified (haematoxylin and eosin stain, $\times 50$).

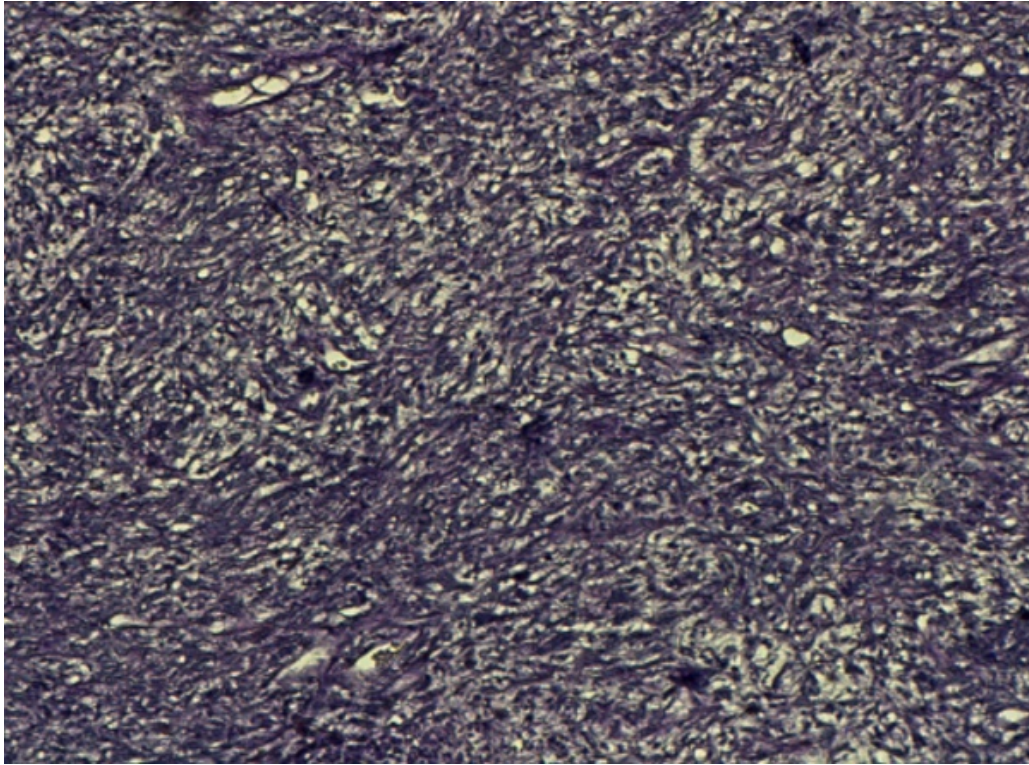


Figure 2: Schmincke-type carcinoma. PAS stain, $\times 10$. Diffuse syncytial growth of undifferentiated epithelial cells with indistinct cell borders within a dense lymphoid stroma. PAS positivity is present in scattered tumour cells.

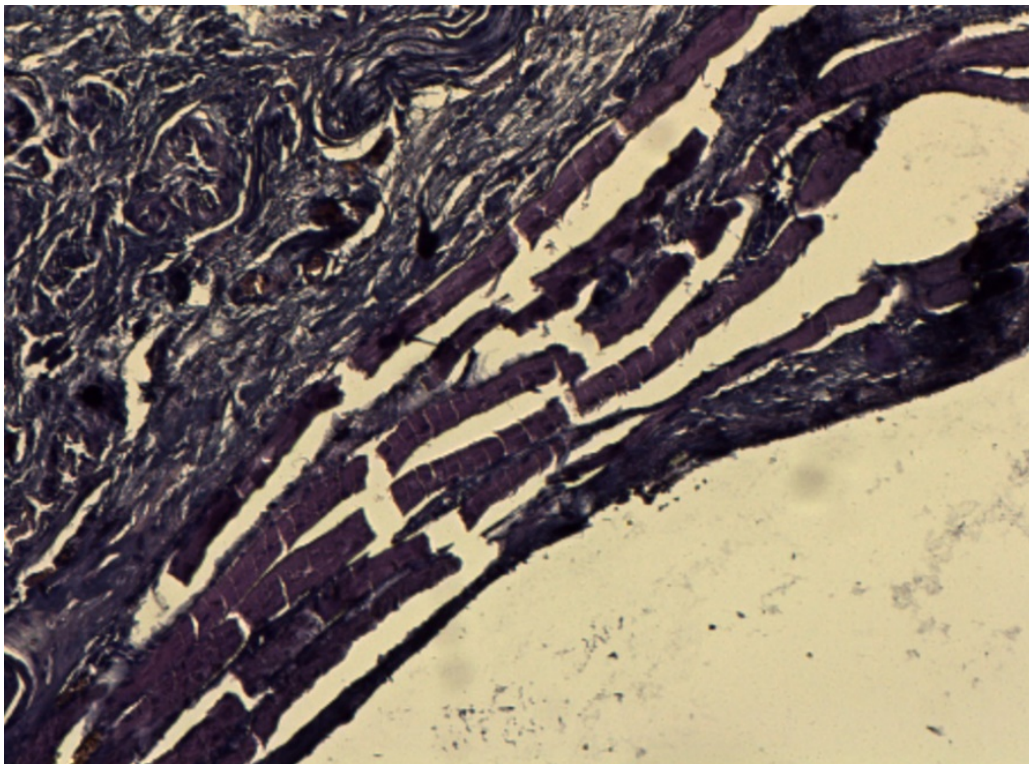


Figure 3: Haematoxylin and eosin stain, $\times 20$. Poorly differentiated squamous cell carcinoma of the Regaud–Schmincke type demonstrating infiltrative growth with marked invasion of striated muscle. Nests and strands of atypical, poorly differentiated cells with hyperchromatic nuclei infiltrate and destroy striated muscle fibres.

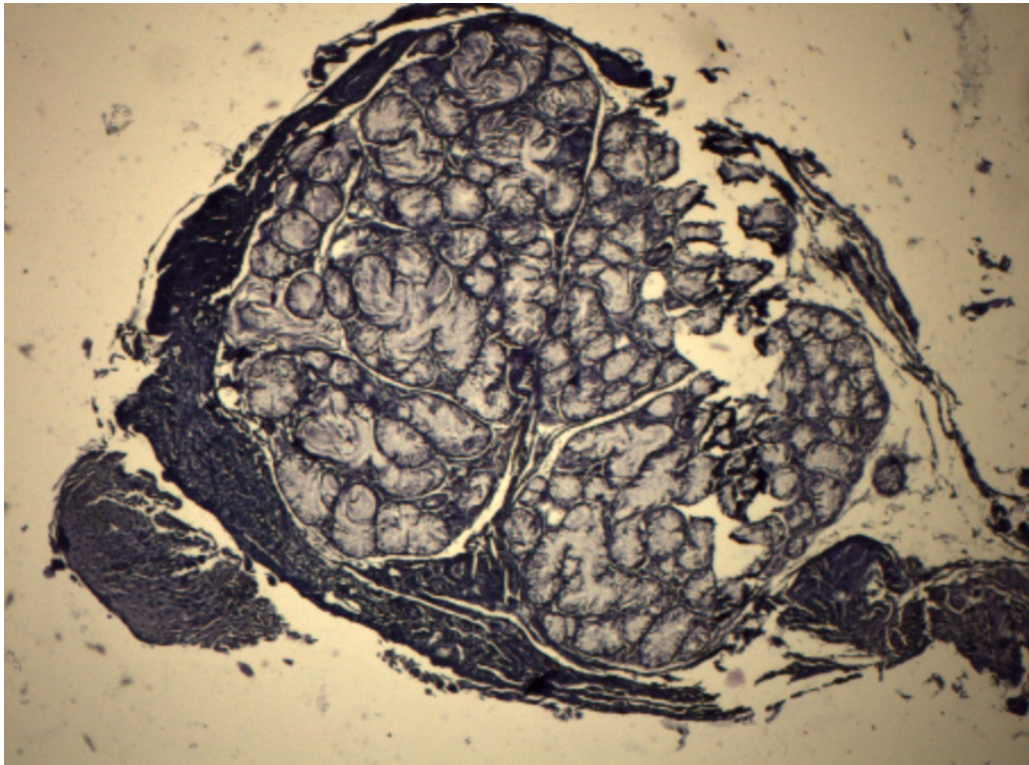


Figure 4: Haematoxylin and eosin stain, $\times 10$. Poorly differentiated squamous cell carcinoma of the Regaud–Schmincke type involving a salivary gland. Tumour nests and solid sheets of poorly differentiated cells infiltrate the glandular parenchyma, disrupting the normal lobular architecture.

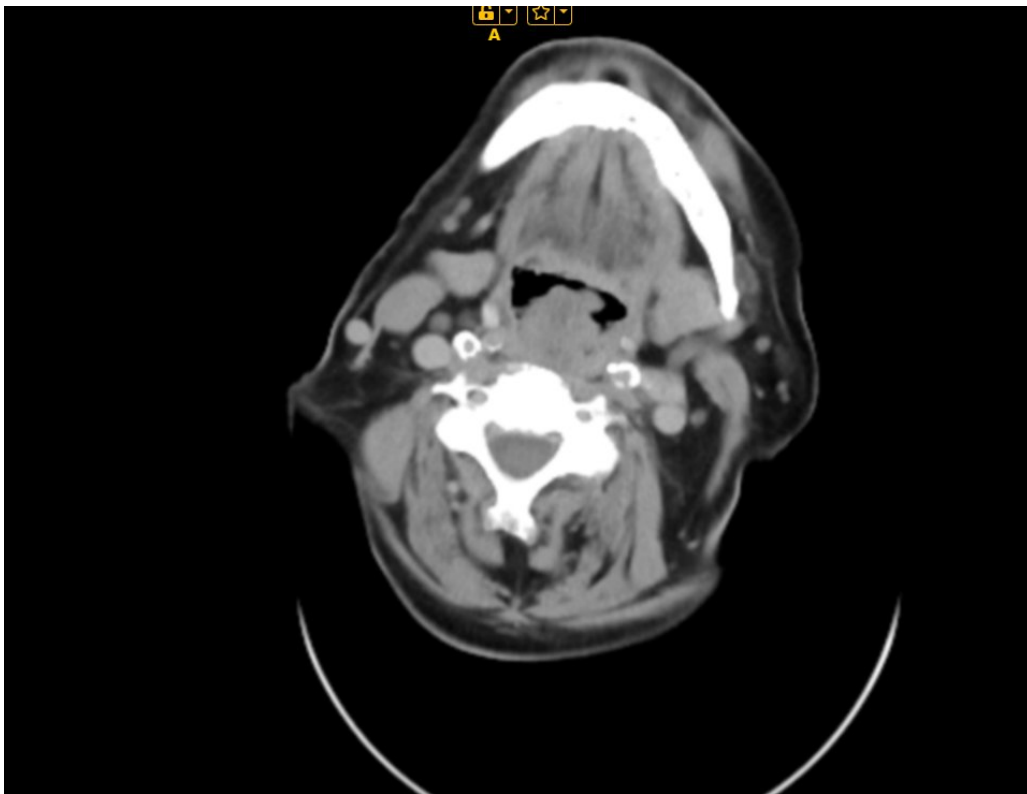


Figure 5: Contrast-enhanced CT of the neck, axial view (upper level). A large, heterogeneously enhancing polypoid mass is seen arising from the posterior pharyngeal wall, with near-complete obliteration of the oropharyngeal lumen. The lesion demonstrates heterogeneous contrast enhancement consistent with internal necrosis. No bony erosion of adjacent cervical vertebrae is identified.



Figure 6: Contrast-enhanced CT of the neck, axial view (lower level). The lesion extends inferiorly toward the hypopharynx with progressive airway narrowing. The overall craniocaudal extent of the mass measured approximately 64 mm. No cervical lymphadenopathy suspicious for nodal metastasis is identified at this level.