

**Case Report**

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Oropharyngeal Carcinoma: An update and Case Report

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Abstract

Background: Squamous cell carcinoma is the most common histopathological malignancy of the oropharynx. The main risk factors include tobacco use, alcohol consumption, and human papillomavirus (HPV) infection. The prognosis depends on the disease stage at the time of diagnosis, timely treatment, and HPV status (particularly genotype 16). HPV-associated disease is linked to a higher 5-year survival rate compared to HPV-negative tumors.

Case Description: We present the case of a 71-year-old male with squamous cell carcinoma at the base of the tongue, highlighting the diagnostic and therapeutic challenges and emphasizing the importance of early symptom recognition and multidisciplinary management.

Conclusion: Oropharyngeal squamous cell carcinoma requires a multidisciplinary approach. Treatment strategies must prioritize organ function preservation and quality of life while achieving locoregional control.

Keywords: Oropharyngeal carcinoma; Human papillomavirus; Base of the tongue carcinoma

Introduction

Squamous cell carcinoma is the most frequent histological type among malignant neoplasms of the oral cavity and oropharynx, accounting for over 90% of malignant tumors in this anatomical region. The base of the tongue is part of the oropharynx and is clinically relevant because of its rich lymphatic drainage and the difficulty of detecting early lesions. These factors frequently result in a diagnosis at locally advanced stages or with cervical lymph node metastasis at the initial presentation [1-3].

The epidemiology of oropharyngeal squamous cell carcinoma

has evolved over time. Historically, it was strongly associated with chronic exposure to tobacco and alcohol. However, an increasing proportion of cases are associated with HPV infection, particularly genotype 16. In older adults, traditional carcinogen-related disease may still predominate, often exhibiting more aggressive biological behavior and a less favorable prognosis compared to HPV-associated tumors [2-5].

Early-stage symptoms are often nonspecific and may include odynophagia, dysphagia, globus sensation, dysphonia, referred

otalgia, and weight loss. Due to the deep anatomical location of the base of the tongue, standard physical examination may be insufficient; therefore, flexible nasopharyngolaryngoscopy complemented by imaging techniques (e.g., contrast-enhanced computed tomography or magnetic resonance imaging) is essential to evaluate the extent of local and regional disease. Definitive diagnosis requires histopathological confirmation via biopsy [2, 3, 5].

Treatment is determined by the clinical stage, performance status, and tumor biology, justifying the need for multidisciplinary care. Treatment options include surgery, radiotherapy, and chemotherapy, either alone or in combination, aiming to achieve locoregional control, preserve function, and improve survival [2, 5, 6]. Current practice increasingly favors organ-preservation approaches when feasible.

Case Presentation

A 71-year-old male presented with a 6-month history of an oropharyngeal foreign body sensation and difficulty handling oral secretions, associated with intermittent coughing productive of clear, occasionally tick sputum, along with odinophagia and bilateral ear fullness.

The patient reported a history of long term tobacco use from childhood until 10 years prior to the consultation. Alcohol consumption was occasional (social). He denied any known chronic degenerative diseases.

Physical examination revealed decreased tongue mobility. Flexible videolaryngoscopy disclosed a tumor at the base of the tongue, at the level of the lingual tonsils, measuring approximately 35 × 28 mm, with poorly defined margins, a firm consistency, and no apparent hypervascularity. Left level IIB lymphadenopathy (~32 mm) was also palpated, fixed to deep structures, without overlying skin changes and no tenderness.

Contrast-enhanced computed tomography (CT) of the neck revealed an infiltrative lesion at the base of the tongue and a suspicious enlarged lymph node at the described levels, showing low contrast enhancement. An incisional biopsy performed under local anesthesia confirmed the diagnosis of poorly differentiated, non-keratinizing invasive squamous cell carcinoma with moderate-to-intense intratumoral lymphocytic infiltrate.

HPV testing via PCR was requested, yielding a positive result for HPV genotype 16. A subsequent positron emission tomography (PET) scan demonstrated metabolically active disease at the base of the tongue with left cervical lymph node involvement.

Based on the oncological staging as an oropharyngeal (base of the tongue) squamous cell carcinoma, staged as T2N1M0, the patient was deemed eligible for definitive chemoradiotherapy with curative intent (72 Gy, 60 Gy, and 54 Gy administered in 30 fractions as planned).

Treatment-related adverse effects included nausea, xerostomia, mucositis, ageusia, and odynophagia. A follow-up PET/CT scan

performed two months after completing treatment showed no abnormal hypermetabolic lesions. The patient remained under follow-up with annual PET/CT scans; the most recent scan was performed in 2026, showing no evidence of disease recurrence to date.

Discussion

Prognosis in oropharyngeal carcinoma is highly influenced by tumor location, stage at diagnosis, and early detection [4, 7].

Generally, treatment consists of radiotherapy with or without chemotherapy. Due to the oropharyngeal lymphatic drainage, cervical lymph node metastasis is frequent. If there is no response to initial chemoradiotherapy, salvage surgery options, including neck dissection, may be considered in selected cases [7].

Surgical treatment may also be considered depending on tumor location and extent, especially since treatment-related sequelae can significantly impact the quality of life in tongue cancer and adjacent subregions. Therefore, current management strategies focus not only on survival but also on functional preservation. Since this anatomical region is critical for swallowing, speech, and breathing, post-treatment alterations frequently reduce patient quality of life [2, 5].

Regarding prognosis, a 5-year overall survival rate of approximately 52% has been reported in the context of oral cavity and oropharyngeal cancers [7]. Higher survival is observed in HPV-associated carcinoma (often >80% at 5 years) compared to HPV-negative carcinoma (often <50% at 5 years). This disparity is attributed to favorable tumor biology, earlier detection, and generally better patient baseline health. High p16 expression and HPV positivity are strongly associated with an improved prognosis [8].

Conclusion

Oropharyngeal squamous cell carcinoma requires a multidisciplinary approach. Prognosis depends heavily on the stage at diagnosis, timely and appropriate treatment, patient-specific factors, and HPV status. Selecting an individualized treatment strategy is pivotal to achieving favorable oncological outcomes while preserving function and patient quality of life.

Acknowledgement

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Conflicts of Interest

No conflicts of interest.

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