



Case Report

Bullous Pemphigoid Masking Underlying Tongue Squamous Cell Carcinoma in A Patient with Submental Abscess: A Diagnostic Challenge

Utkarsh Jain¹, Kriti Jain²

¹ Senior Resident, Department of ENT, Government Doon Medical College, Dehradun, Uttarakhand, India.

² Senior Resident, Department of Dermatology, Government Doon Medical College, Dehradun, Uttarakhand, India.

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Corresponding Author:

Utkarsh Jain

Senior Resident, Department of ENT, Government Doon Medical College, Dehradun, Uttarakhand, India.

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ABSTRACT

Elderly patients often present with multiple coexisting pathologies that can obscure the primary diagnosis. We report a case of an 87-year-old female who presented with submental swelling, oral cavity lesions, dysphagia, and breathing difficulty. Initial evaluation suggested bullous pemphigoid with secondary infection. Although incision and drainage of the submental swelling led to symptomatic improvement, a persistent tongue lesion prompted biopsy, which revealed squamous cell carcinoma of the tongue. This case highlights the importance of maintaining suspicion for malignancy in non-healing oral lesions, even in the presence of other apparent diagnoses.

Keywords: Submental swelling, Tongue carcinoma, Squamous cell carcinoma, Bullous pemphigoid, Elderly patient.

INTRODUCTION

Submental swellings are commonly encountered in otolaryngology practice and are most often inflammatory or infective in origin. However, in elderly patients, malignant etiologies must always be considered. Oral cavity malignancies, particularly squamous cell carcinoma, may present subtly and can be masked by coexisting inflammatory or autoimmune mucocutaneous disorders such as bullous pemphigoid. Bullous pemphigoid is a chronic autoimmune blistering disease seen predominantly in the elderly, characterized by tense bullae and erosions involving skin and sometimes mucous membranes. We present a rare diagnostic dilemma where submental abscess and bullous pemphigoid delayed the diagnosis of underlying tongue squamous cell carcinoma.

Case Presentation

An 87-year-old female presented to the ENT outpatient department with complaints of swelling below the chin for 15 days, lesions in the oral cavity for 10 days, difficulty in swallowing, and difficulty in breathing. There was no documented history of tobacco or alcohol use. She had no known past history of malignancy.

On local examination, a tender, inflamed swelling was noted in the submental region. Intraoral examination revealed multiple erosive lesions involving the oral mucosa and tongue. The patient was noted to have very poor oral hygiene, with heavy dental plaque, halitosis, and poor dentition. In view of the widespread oral lesions, a dermatology opinion was sought. Based on clinical findings, she was diagnosed with bullous pemphigoid and started on conservative management.

Considering the acute inflammatory nature of the submental swelling, incision and drainage were performed, and approximately 7 cc of pus was drained. The pus sample was sent for culture and sensitivity, which showed no growth,

possibly due to prior antibiotic administration. Regular dressings were done, and the submental swelling gradually improved.

Despite resolution of the neck swelling and improvement in general oral lesions, a single ulcerative lesion on the tongue persisted. The lesion was indurated, non-healing, and suspicious in appearance. A biopsy was taken from the tongue lesion. Histopathological examination revealed features consistent with squamous cell carcinoma of the tongue.

Subsequently, the patient was referred to the oncology department, where she was started on chemotherapy considering her advanced age and overall clinical status. She responded well to treatment, with improvement in symptoms and general condition on follow-up.

Investigations

Incision and drainage yielded 7 cc of pus from submental region

Pus culture and sensitivity: No growth

Radiological evaluation suggested tongue mass with cervical lymphadenopathy, suspicious for malignant etiology

Biopsy from tongue lesion: Squamous cell carcinoma

DISCUSSION

This case illustrates the complexity of diagnosing oral malignancy in the presence of coexisting inflammatory and autoimmune conditions in the elderly. The patient presented with three overlapping clinical problems: a submental abscess, widespread oral erosions due to bullous pemphigoid, and an underlying tongue carcinoma. Each of these conditions can independently cause pain, dysphagia, and mucosal ulceration, making clinical distinction difficult without a high index of suspicion. Oral squamous cell carcinoma (OSCC) accounts for the vast majority of oral cavity cancers worldwide and remains a major cause of morbidity and mortality [1,4].

Submental and submandibular space infections are most commonly odontogenic or secondary to infections of the oral cavity and salivary glands [2]. However, malignant lesions of the tongue and floor of mouth can ulcerate, become secondarily infected, and present as deep neck space infections. In elderly patients, malignancy-related necrosis and poor local immunity further predispose to secondary infection. Therefore, any neck abscess associated with oral cavity lesions should prompt careful evaluation for an underlying primary pathology.

Bullous pemphigoid predominantly affects the skin, but oral involvement is well recognized. Oral lesions usually present as erosions or ulcers following rupture of bullae and may closely resemble traumatic ulcers, aphthous ulcers, or even early malignancy [3]. In this patient, the diagnosis of bullous pemphigoid explained the widespread oral erosions and initially provided a unifying diagnosis. However, the persistence of a single indurated tongue lesion despite improvement of other lesions was a key clinical clue that led to biopsy and definitive diagnosis of squamous cell carcinoma.

Several previously reported cases in the literature describe oral malignancies being masked by inflammatory or autoimmune mucocutaneous diseases such as lichen planus, pemphigus vulgaris, and bullous pemphigoid. In many of these cases, diagnosis of carcinoma was delayed because the malignant lesion was assumed to be part of the primary mucocutaneous disorder [3,4]. Reports also exist of tongue and floor-of-mouth carcinomas presenting as submental or submandibular abscesses due to secondary infection of the tumor bed. These cases emphasize that failure of a lesion to heal with appropriate medical treatment should always trigger histopathological evaluation.

Elderly patients pose additional diagnostic challenges. Age-related immune dysfunction, atypical symptom presentation, and multiple comorbidities can all contribute to delayed diagnosis. Moreover, clinicians may be reluctant to pursue invasive investigations in very elderly patients, assuming benign or inflammatory causes. However, demographic studies show that incidence of oral cancer increases with advancing age, making vigilance even more important in this population [1,5]. This case demonstrates that age alone should never preclude biopsy of a suspicious lesion, as timely diagnosis can still significantly improve quality of life and survival.

The turning point in this case was the decision to biopsy the persistent tongue lesion despite apparent improvement of the neck abscess and other oral lesions. This highlights the importance of repeated clinical reassessment rather than reliance on initial diagnoses. A non-healing, indurated, or progressively enlarging oral ulcer, especially on the tongue, must always be considered malignant until proven otherwise [4].

From a teaching perspective, this case reinforces three important principles. In addition, it highlights the importance of dermatological manifestations as early diagnostic clues in systemic and head–neck pathology. Oral and mucocutaneous lesions evaluated primarily from a dermatological perspective may coexist with, or mask, underlying malignant disease. Close collaboration between dermatology, otolaryngology, and pathology is essential, particularly when lesions show

atypical behavior or fail to respond as expected to standard therapy. First, deep neck space infections may occasionally be secondary to underlying malignancy. Second, autoimmune or inflammatory oral diseases can mask early oral cancers. Third, persistence of a lesion after adequate treatment is an absolute indication for biopsy. Recognizing these principles can prevent diagnostic delay and significantly impact patient outcomes.

CONCLUSION

This case emphasizes the diagnostic challenges posed by overlapping infective, autoimmune, and malignant conditions in elderly patients. Submental swelling should not always be assumed to be purely infective in origin, especially when associated with oral cavity lesions. Coexisting conditions such as bullous pemphigoid can obscure or mimic malignant changes, leading to delay in diagnosis.

Equally important, this case highlights the value of dermatological assessment in identifying mucocutaneous disorders that may coexist with serious underlying disease. Dermatological manifestations should prompt careful and repeated oral examination, and any persistent or atypical lesion must be biopsied regardless of other apparent diagnoses. Multidisciplinary collaboration between ENT surgeons, dermatologists, radiologists, pathologists, and oncologists is crucial for timely diagnosis and optimal patient outcomes.

Patient Consent

Informed consent was obtained from the patient and her relatives for publication of clinical details and images.

Declaration:

Conflicts of interests: The authors declare no conflicts of interest.

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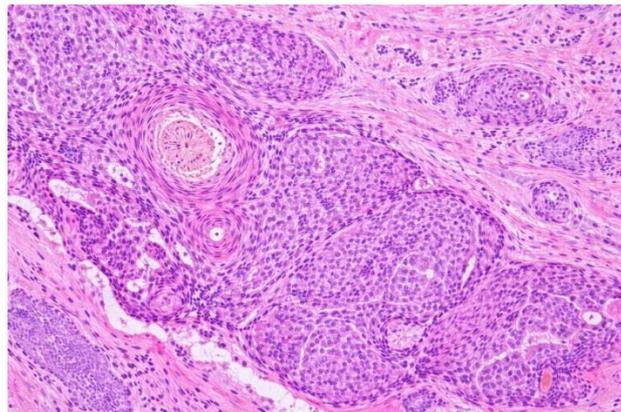


Image 1 – Histopathology (H&E stain): Microscopic section shows features of well-differentiated squamous cell carcinoma. There are irregular nests and islands of malignant squamous cells infiltrating the stroma, with prominent keratin pearl formation, nuclear pleomorphism, hyperchromasia, and increased mitotic activity. Surrounding stroma shows inflammatory cell infiltrate.



Image 2 – Intraoral Clinical Photograph: Open-mouth view of an elderly female showing very poor oral hygiene with heavy dental plaque, carious and broken teeth, and halitosis-suggestive debris. The tongue shows a large, irregular, exophytic and ulceroproliferative growth involving the anterior and lateral surface, with areas of necrosis and slough. Surrounding oral mucosa shows erosions and crusted lesions consistent with bullous/pemphigoid-like disease.



Image 3 – Submental Region (Pre-procedure): Clinical photograph showing a large inflamed swelling in the submental region with erythema, edema, and central ulceration/discharge suggestive of an abscess. Overlying skin appears tense and shiny with areas of necrosis and purulent slough.



Image 4 – Submental Region (Post-procedure): Post-incision and drainage image showing sutured wound in the submental region after debridement. Surrounding skin shows postoperative inflammation with reduced tension compared to the pre-procedure image. Sutures are seen approximating the wound margins.



Image 5 – Frontal View of Patient: Frontal clinical photograph of the elderly patient in supine position showing a large ulcerated lesion over the submental region with irregular margins, necrotic base, and surrounding erythema. The lesion corresponds to the site of abscess and surgical intervention.

REFERENCES

1. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer. *Oral Oncol.* 2009;45(4–5):309–316.
2. Neville BW, Damm DD, Allen CM, Chi AC. *Oral and Maxillofacial Pathology.* 4th ed. Elsevier; 2016.
3. Di Zenzo G, Della Torre R, Zambruno G, Borradori L. Bullous pemphigoid: From the clinic to the bench. *Clin Dermatol.* 2012;30(1):3–16.
4. Scully C, Bagan JV. Oral squamous cell carcinoma overview. *Oral Oncol.* 2009;45(4–5):301–308.
5. Silverman S Jr. Demographics and occurrence of oral and pharyngeal cancers. *Oral Maxillofac Surg Clin North Am.* 2006;18(4):379–385.