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## Dermatological Red Flag: Fixed Drug Eruption Leading to Discovery of Underlying Tongue Malignancy: A Rare Clinical Association.

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### ABSTRACT

Fixed drug eruption (FDE) is a cutaneous adverse drug reaction characterized by recurrent lesions at the same anatomical sites upon re-exposure to the offending drug. Squamous cell carcinoma (SCC) of the tongue is a malignant neoplasm often associated with chronic tobacco and betel nut use. We report a rare case of a 70-year-old female presenting with concurrent FDE and moderately differentiated SCC of the tongue, posing a diagnostic dilemma due to overlapping mucocutaneous manifestations. This case underscores the importance of thorough evaluation of persistent oral lesions, especially in patients with significant risk factors.

**Keywords:** tongue, malignancy, red flag.

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## INTRODUCTION

Fixed drug eruption is a type of drug-induced dermatosis that presents with sudden onset of round or oval erythematous patches or plaques, occasionally involving mucous membranes. Common causative agents include antibiotics like sulfonamides and NSAIDs such as diclofenac. Oral squamous cell carcinoma is a significant health concern, particularly in regions where tobacco chewing and betel nut consumption are prevalent. The tongue is a common site for oral SCC, and early diagnosis is crucial for better prognosis. The simultaneous occurrence of FDE and oral SCC is exceptionally rare, and cases presenting with both conditions can present diagnostic challenges due to overlapping symptoms such as mucosal ulcers and erosions [1-5].

## CASE PRESENTATION

A 70-year-old married female farmworker from Buldhana, Maharashtra, presented to our tertiary care centre with a one-week history of painful reddish lesions on both palms and blackish lesions on her body. She also reported a single painful ulcer on the tongue that had been persisting for eight to ten months.

### History and Clinical Findings

The patient's immediate concern was the sudden appearance of painful reddish lesions on both palms and blackish lesions across her body, which had developed over the previous week. However, she had also been suffering from a persistent, painful ulcer on her tongue for eight to ten months.

The patient's history revealed significant risk factors, particularly her 30-year habit of using mishri (a form of smokeless tobacco) and a 20–25 year history of tobacco and betel nut consumption. Her oral symptoms had begun eight to ten months prior to presentation, initially manifesting as an intolerance to spicy food and an erosion on the left lateral border of her tongue. While the ulcer was initially painless, it had become increasingly painful in the three to four months before seeking care at our facility. Despite consulting various private practitioners and attempting multiple home remedies, she had experienced no improvement.

The acute dermatological manifestations appeared following the administration of diclofenac and cefpodoxime, which she had received from a private practitioner for generalized body aches and a presumed infection. These manifestations included multiple ill-defined, tender, erythematous plaques on both palms and symmetrically distributed, well-defined, erythematous to hyperpigmented patches with scaling across her limbs and trunk. Notably, she reported a similar episode of skin lesions a decade ago, though detailed information about this previous occurrence was unavailable.



Figure 1: Fixed Drug Eruption on Back



Figure 2: Fixed Drug Eruption on Lower Limb

Physical examination revealed stable vital signs and normal systemic findings. The dermatological examination confirmed the presence of the described lesions, including an ill-defined erosion with erythema and a black, slightly adherent crust on the lips. Of particular concern was a well-defined, crateriform ulcer with whitish slough at the base, located on the left lateral border of the tongue.

### Laboratory and Histopathology

Laboratory investigations showed largely unremarkable findings, with only mild deviations in some parameters. However, the histopathological examinations proved crucial for diagnosis. The skin biopsy revealed changes consistent with fixed drug eruption, including epidermal atrophy, mild spongiosis, lymphocyte exocytosis, and characteristic dermal changes. More significantly, the tongue biopsy confirmed the presence of moderately differentiated squamous cell carcinoma, characterized by tumor cells arranged in sheets and clusters, with pleomorphic vesicular nuclei, moderate eosinophilic cytoplasm, increased mitotic activity, and individual cell keratinization.



Figure 3: Ulcer on Left Border of Tongue



Figure 4: Ulcer, Slough on Left Border of Tongue

### Clinical Course and Management

A provisional diagnosis of resolving fixed drug eruption was made based on the temporal relationship between drug intake and skin lesions, along with the history of similar lesions a decade prior. The persistent ulcer on the tongue, coupled with the patient's risk factors, raised suspicion for squamous cell carcinoma, which was confirmed by biopsy.

The patient was started on a tapering dose of intravenous dexamethasone (1 mg four times daily), antibiotics, and oral supplements including multivitamins and folic acid. Topical emollients were applied to skin lesions. A rechallenge with NSAIDs conducted externally confirmed the diagnosis of FDE, as re-exposure led to recurrence of similar lesions. The patient was advised to avoid NSAIDs, particularly diclofenac, in the future.

For the SCC of the tongue, the patient was referred to the Otorhinolaryngology and oncology department for further evaluation and management, which would include imaging for staging (not available at the time) and discussion of surgical and adjunctive treatment options [6-10].

### DISCUSSION

This case illustrates the diagnostic complexity when a patient presents with concurrent mucocutaneous disorders. The coexistence of FDE and SCC of the tongue is rare and poses significant diagnostic and therapeutic challenges.

FDEs are known to occur at any age but are less commonly reported in the elderly population. NSAIDs and antibiotics are well-documented triggers. The characteristic feature of FDE is the recurrence of lesions at the same site upon re-exposure to the offending drug. In this patient, the use of diclofenac and cefpodoxime preceded the onset of skin and mucosal lesions, and rechallenge confirmed diclofenac as the causative agent.

Oral SCC is associated with chronic exposure to carcinogens found in tobacco and betel nut, both of which were significant factors in this patient's history. The lesion's location on the lateral border of the tongue is typical for SCC. The persistence and progression of the ulcer despite cessation of irritants and initial treatments highlight the aggressive nature of the disease. The overlapping symptoms of FDE and SCC, such as mucosal ulceration and erythema, can complicate the diagnostic process. Clinicians must maintain a high index of suspicion for malignancy in patients with risk factors and persistent oral lesions.

### CONCLUSION

This case emphasizes the need for comprehensive evaluation of mucocutaneous lesions, especially in the elderly with significant risk factors. The coexistence of fixed drug eruption and moderately differentiated squamous cell carcinoma of the tongue is an uncommon clinical scenario that requires a multidisciplinary approach for diagnosis and management. Early identification and appropriate treatment are crucial for improving patient outcomes. The case also emphasizes the critical need for early recognition and proper investigation of persistent oral lesions, especially in patients with risk factors for oral malignancy. The delayed presentation of this patient, despite having symptoms for several months, underscores the importance of public health education about oral cancer awareness and the risks associated with tobacco use in any form.

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