DOI: 10.7860/JCDR/2026/81117.22295

Case Report

Oncology Section

Eosinophilic Ulcer Mimicking Tongue Malignancy: A Case Report

VENKATESH M REWALE[1], SWATI KULKARNI[2], KAMAYANI DESHPANDE[3], SHUBHAM R BOBADE[4]

ABSTRACT

Eosinophilic ulcer of the oral mucosa is a rare and benign condition that clinically mimics oral malignancy due to its alarming features such as indurated, everted margins and prolonged persistence. This case report discusses a 70-year-old female who presented with a chronic non-healing ulcer on the right lateral border of the tongue, which had been present for three months and caused discomfort during speech and mastication. Ultrasonography showed no neck lymph node involvement. A biopsy of the lesion demonstrated a dense eosinophilic infiltrate without evidence of malignancy. To confirm the diagnosis and ensure complete excision, a wide local excision with adequate margins was performed. Histopathological analysis of the excised tissue confirmed the diagnosis of eosinophilic ulcer, revealing stratified squamous epithelium with surface ulceration, a dense inflammatory infiltrate rich in eosinophils, neutrophils, and plasma cells, and no evidence of malignancy or epithelial dysplasia. Postoperative recovery was uneventful, with no recurrence noted during follow-up. Eosinophilic ulcers are commonly misdiagnosed due to their resemblance to malignant lesions. Although the aetiopathogenesis remains unclear, trauma is a suspected contributing factor. In this case report, an intricate tooth bite was identified as the contributing causative factor. Surgical excision is considered the treatment of choice, with excellent prognosis and low recurrence rates. This case emphasises the critical role of histopathological examination in differentiating benign ulcers from malignant lesions, thus preventing overtreatment. Eosinophilic ulcer should be considered in the differential diagnosis of chronic oral ulcers, especially when typical risk factors for malignancy are absent.

Keywords: Benign ulcer, Eosinophil, Mouth ulcer, Oral ulcers

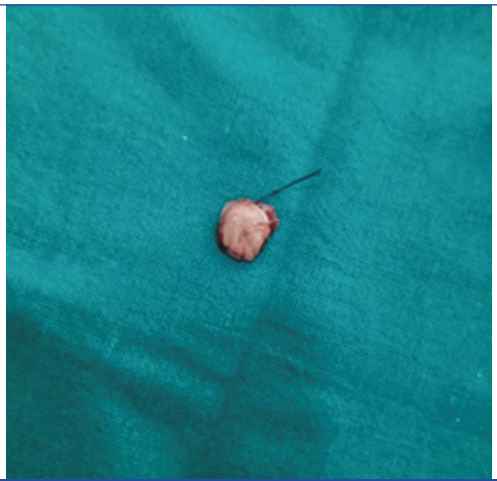
CASE REPORT

A 70-year-old female presented to the surgery department with a complaint of an ulcer on the right lateral border of the tongue for the past three months [Table/Fig-1]. The patient had been experiencing discomfort and mild pain during speech and mastication for over two weeks. The condition had begun as a slightly red lesion, which had rapidly progressed to the present state. Intraoral examination revealed an approximately 1.5 cm × 1 cm × 0.5 cm ulcer on the right lateral border of the tongue. The ulcer had everted margins, with no induration or tenderness, exhibited bleeding on touch, and was not fixed to the underlying structures. There was no evidence of regional lymph node involvement. There was no history of previous dental treatment or any surgery. The patient was a non-smoker and had no history of alcohol or tobacco chewing. There was no family history of similar complaints. Vital signs were stable on examination.

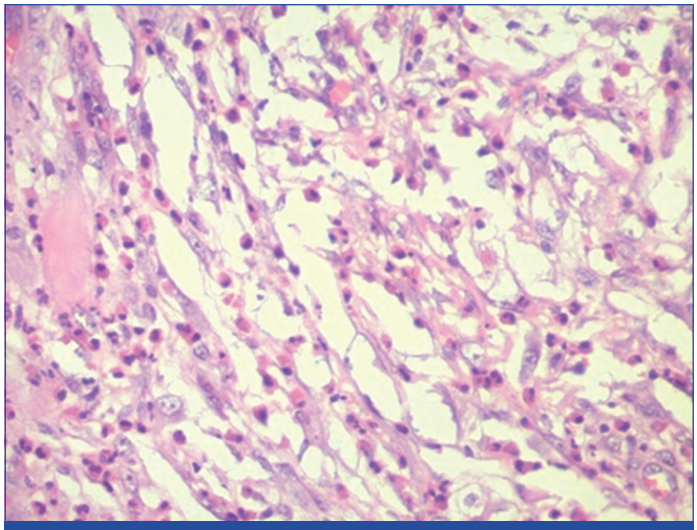
Ultrasonography of the neck was performed and revealed no abnormalities, with no evidence of lymph node involvement. Histopathological examination of an incisional biopsy taken from the tongue ulcer showed the presence of eosinophils, with no features suggestive of malignancy. To further confirm the diagnosis, definitively rule out malignancy, and complete surgical management, a wide local excision with margins as per oncological principles was performed [Table/Fig 2]. Primary closure was done.

Histopathological assessment of the specimen from the wide local excision revealed stratified squamous epithelium with surface ulceration and underlying fibrinous material. There was a dense inflammatory infiltrate composed of eosinophils, neutrophils, and plasma cells. The base and all margins were free from ulcerative or dysplastic changes. These findings were consistent with an eosinophilic ulcer of the tongue. No evidence of malignancy or epithelial dysplasia was observed [Table/Fig-3,4]. Postoperatively, the patient received intravenous ceftriaxone and analgesics, along with normal saline mouth washes. She was discharged after three days, asymptomatic, and attended follow-up visits every three months, which revealed an uneventful recovery with no recurrence.

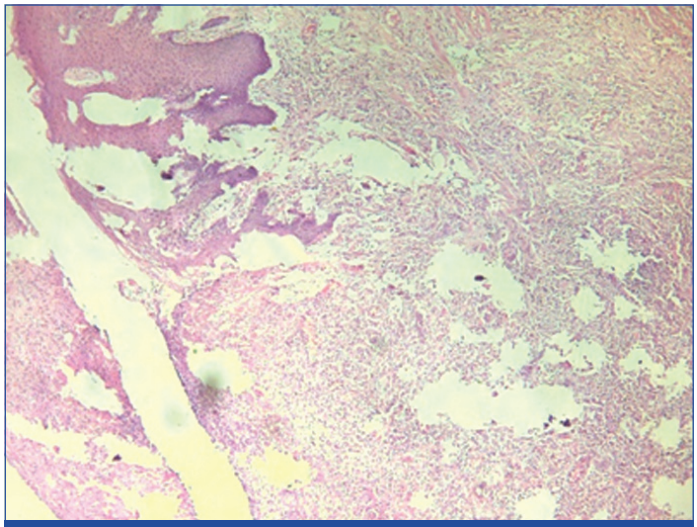
[Table/Fig-1]: Ulcer at the right lateral border of the tongue with everted margins.



[Table/Fig-2]: Wide local excision specimen (1.5 x 1.4 x 0.5 cm) showing an ulcerated area (1.3 x 1.0 cm) with everted margins.



[Table/Fig-3]: High-power microscopic view showing a dense inflammatory infiltrate composed of eosinophils (original magnification 40×).



[Table/Fig-4]: Low-power microscopic view showing a dense inflammatory infiltrate composed of eosinophils (original magnification 4×).

DISCUSSION

Eosinophilic ulcer of the oral mucosa is a rare benign condition that often mimics malignancy clinically. It typically presents as a rapidly developing solitary ulcer, ranging from a few millimetres to several centimetres in diameter, with elevated and everted margins- features that give it a malignant appearance [1]. The ulcers may be asymptomatic or extremely painful, which can clinically resemble oral cancer and often leads to early misdiagnosis. Diagnosing eosinophilic ulcer is challenging due to its lack of distinctive clinical characteristics [Table/Fig-5] [2]. Therefore, performing a diagnostic biopsy with histopathological assessment is essential, followed by wide local excision as the definitive treatment [3].

Traumatic Ulcerative Granuloma with Stromal Eosinophilia (TUGSE) was first described by Popoff in 1956 and has been referred to by several names, including eosinophilic ulcer and Riga-Fede disease [4]. Although the specific aetiopathogenesis is not yet fully understood, injury or trauma is considered a contributing factor in its development [5]. The condition is more commonly seen in patients aged 30 to 50 years, but can also occur in infants and the elderly. The sex distribution is equal or slightly higher in females, with over half of the lesions occurring on the tongue [6,7]. Other possible sites include the lips, buccal mucosa, palate, gingiva, and floor of the mouth [8]. The nomenclature for eosinophilic ulcer of the oral mucosa varies, including terms such as eosinophilic ulcer, eosinophilic granuloma of tissue, traumatic granuloma, atypical histiocytic granuloma, and traumatic ulcerative granuloma with stromal eosinophilia. In infants, it is commonly known as Riga-Fede disease [9]. The differential diagnosis includes traumatic ulcer, squamous cell carcinoma, aphthous ulcer, Wegener's granulomatosis, syphilis, histiocytosis X, histoplasmosis, tuberculosis, discoid lupus erythematosus, lymphoma, and salivary gland tumours [10,11].

Similar findings were reported in a case where medical treatment showed no improvement. An incisional biopsy was performed prior to surgical management, and no recurrence was observed. Histopathological examination revealed an ulcerated surface with mixed inflammatory infiltrate, including several eosinophils extending into the mucosa and submucosa. No cellular atypia was noted. Based on the patient's history and mucosal biopsy, a final diagnosis of eosinophilic ulcer of the oral mucosa was established [12]. In a case report, a painless lesion on the posterior hard palate had been present for two weeks. A single application of liquid nitrogen reduced the lesion. Nitrogen therapy was effective in decreasing the lesion size and promoting healing [13]. Nevertheless, another case report described rapid improvement of the ulcer following an incisional biopsy. Despite this initial response, the patient required corrective surgery 45 days later due to the persistence of the exophytic growths [14].

Various therapeutic approaches have been reported, with surgical excision being the most commonly performed and preferred treatment. Recurrence is rare following excision. Additional treatment options include topical steroids, medicated mouthwashes, intralesional or systemic corticosteroids, topical antibiotics, curettage, and cryotherapy [15]. In cases lacking classical risk factors for malignancy, an eosinophilic ulcer should be carefully considered. Wide local excision remains crucial for evaluating lesion margins and definitively ruling out malignant transformation. Long-term follow-up is necessary to monitor for potential recurrence, even though it is rare. Furthermore, given the limited available data and absence of clinical trials, there is a clear need for well-designed prospective studies to evaluate the outcomes and efficacy of various treatment modalities. Conducting such trials would enhance understanding and help establish standardised treatment protocols for eosinophilic ulcer of the oral mucosa.

S. No.		Eosinophilic ulcer of the oral mucosa	Malignant ulcer	Traumatic ulcer
1	Aetiology	Unknown	Genetics	Trauma/Injury
2	Clinical features	Benign, self-limiting, ulcer with induration, elevated and indurated borders. The tongue is the most common site. No lymphadenopathy. Faster recovery after treatment.	Malignant, no self-limitation, ulcer with indurated raised borders. Tongue/oral mucosa both involved. Lymphadenopathy in later stages. Uncontrolled growth and nonspontaneous healing.	Benign, symptomatic ulcer with no elevated borders. Affects the oral mucosa. Frequent involvement of lymph nodes. Fast healing after removal of the traumatic agent
3	Histopathological findings	Intense inflammatory cell infiltrate, pronounced eosinophilia	Replacement of basal cells by irregular cells with cytoplasmic processes. Infiltration into connective tissue	Stratified squamous epithelium Hyperplastic or not Hyperkeratosis Intense mixed inflammatory cell infiltrate

[Table/Fig-5]: Major differential diagnosis of eosinophilic ulcer of the oral mucosa [2].

CONCLUSION

This case report underscores the importance of including eosinophilic ulcer in the differential diagnosis of chronic oral ulcers, particularly those that clinically resemble malignancy. Despite its alarming presentation, an eosinophilic ulcer is a benign condition that typically responds well to surgical excision alone. Thorough histopathological evaluation is essential to confirm the diagnosis and exclude malignancy, thereby preventing unnecessary aggressive treatment. Timely diagnosis and appropriate management usually lead to complete resolution with an excellent prognosis.

REFERENCES

[1] RahmatpourRokni G, Sonthalia S, Rathod D, Lotti T, Goldust M. Eosinophilic ulcer mimicking malignancy of the lower lip: A case report. Clin Case Rep. 2020;8(5):804-07. Available from: https://doi.org/10.1002/ccr3.2746.

[2] Sah K, Chandra S, Singh A, Singh S. Eosinophilic ulcer of the tongue masquerading as malignant ulcer: An unexplored distinct pathology. J Oral Maxillofac Pathol. 2017;21(2):321.

[3] Mohamad AF, Rahman NR, Ch'ng ES, Fakrurrozi Mohamad A. A case report of traumatic ulcerative granuloma with stromal eosinophilia (TUGSE): Clinical and histopathological diagnostic challenges. Cureus. 2023;15(11). e48481.

[4] Gong M, Kim MJ, Han SY, Kim HS, Nam W. Two typical and one atypical presentation of TUGSE: Case series and literature review. J Stomatol Oral and Maxillofac Surg. 2025:102525. Available from: https://doi.org/10.1016/j.jormas.2025.102525.

[5] Lingaraju N, Gaddelingiah YB, Shivalingu MM, Khanum N. Eosinophilic ulcer of the tongue: A rare and confusing clinical entity. Case Rep. 201;2015:bcr 2015210107. Available from: https://doi.org/10.1136/bcr-2015-210107.

[6] Ribeiro AL, de Oliveira Mendes FR, Alves SD, Pinheiro JD. Eosinophilic ulcer: The role of stress-induced psychoneuroimmunologic factors. Oral Maxillofac Surg. 2011;15:179-82. Available from: https://doi.org/10.1007/s10006-010-0239-4.

[7] Ada S, Seckin D, Tarhan E, Buyuklu F, Cakmak O, Arikan U. Eosinophilic ulcer of the tongue. Australas J Dermatol. 2007;48(4):248-50. Available from: https://doi.org/10.1111/j.1440-0960.2007.00396.x.

[8] Hamie L, Hamie M, Kurban M, Abbas O. Eosinophilic ulcer of the oral mucosa: An update on clinicopathologic features, pathogenesis, and management. Int J Dermatol. 2022;61(11):1359-63. Available from: https://doi.org/10.1111/ijd.15986,

[9] Ceyhan AM, Yildirim M, Basak PY, Akkaya VB, Ayata A. Traumatic lingual ulcer in a child: Riga–Fede disease. Clin Exp Dermatol. 2009;34(2):186-88. Available from: https://doi.org/10.1111/j.1365-2230.2008.02796.x.

[10] Segura S, Pujol RM. Eosinophilic ulcer of the oral mucosa: A distinct entity or a non-specific reactive pattern? Oral Dis. 2008;14(4):287-95. Available from: https://doi.org/10.1111/j.1601-0825.2008.01444.x.

[11] Bortoluzzi MC, Passador-Santos F, Capella DL, Manfro G, Nodari Jr RJ, Presta AA. Eosinophilic ulcer of oral mucosa: A case report. Ann Stomatol. 2012;3(1):11-3.

[12] Didona D, Paolino G, Donati M, Didona B, Calvieri S. Eosinophilic ulcer of the tongue-Case report. An Bras Dermatol. 2015;90 (3 suppl 1):88-90. Available from: https://doi.org/10.1590/abd1806-4841.20153600.

[13] Chung HS, Kim NS, Kim YB, Kang WH. Eosinophilic ulcer of oral mucosa. Int J Dermatol. 1998;37(6):432. Available from: https://doi.org/10.1046/j.1365-4362.1998.00423.x.

[14] Chandra S, Raju S, Sah K, Anand P. Traumatic ulcerative granuloma with stromal eosinophilia. Arch Iran Med. 2014;17(1):91-94. PMID: 24444070.

[15] Benitez B, Mülli J, Tzankov A, Kunz C. Traumatic ulcerative granuloma with stromal eosinophilia—clinical case report, literature review, and differential diagnosis. World J Surg Oncol. 201917:01-06. Available from: https://doi.org/10.1186/s12957-019-1736-z.

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Wardha, Maharashtra, India.
2. Pathologist, Institute of Surgical Pathology, Nagpur, Maharashtra, India.
3. Pathologist, Institute of Surgical Pathology, Nagpur, Maharashtra, India.
4. Assistant Surgeon, Venkatesh Clinic and Hospital, Nagpur, Maharashtra, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Venkatesh M Rewale,
Associate Professor, Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Wardha-442001, Maharashtra, India.
E-mail: drvmrewale@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Jun 12, 2025
- Manual Googling: Oct 09, 2025
- iThenticate Software: Oct 11, 2025 (9%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Jun 04, 2025**
Date of Peer Review: **Jul 30, 2025**
Date of Acceptance: **Oct 14, 2025**
Date of Publishing: **Jan 01, 2026**