

# RECURRENT APHTHOUS STOMATITIS -A REVIEW

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**Abstract:** Recurrent aphthous stomatitis (RAS), also known as canker sores, is the most common disease of the oral mucosa. In contrast to dental caries and periodontal disease, patients with RAS are it cannot be prevented. The clinical picture of RAS is characterized by recurrent episodes of solitary or multiple pain ulceration without connection to systemic diseases. The aim of this review is to present the basic characteristics of RAS, including its definition, pathogenesis, clinical and microscopic characteristics, proposed experimental models and recommended pharmacological management. This understanding can serve as a theoretical framework for research suggestions.

**Keywords :** Recurrent aphthous stomatitis, canker sore,ulcer)

## 1.Introduction:

Recurrent aphthous stomatitis (RAS) is one of the most common painful oral mucosal diseases seen in patients. They present as recurrent, multifocal, small, round, or oval bordered ulcers with a yellow or Gray base and surrounded by an erythematous halo that first appear in childhood or adolescence. RAS is characterized by recurrent attacks of single or multiple flattened, painful ulcers at intervals of months to days in otherwise healthy patients.<sup>i</sup> RAS was described by Stanley in 1972 in his three different clinical variants.

Differential diagnosis of RAS:

Before making a diagnosis of RAS, the often-overlooked causes of stomatitis must be considered. Mucosal aphthous ulcers can occur in several conditions that require thorough evaluation to narrow the differential. A physical examination should be used to look for signs of dental trauma, extensive bullous rash, and hormonal imbalance. Infection should be investigated in the presence of fever, and febrile syndrome should be suspected in recurrent fevers. Blood tests should be done to rule out hematologic or nutritional deficiencies and antibodies associated with autoimmunity. Differential diagnosis of oral ulcers includes multiple factors including recurrent aphthous stomatitis, drug-induced mucocutaneous syndrome, autoimmune disease, hematologic disease, malnutrition, febrile syndrome, bullous disease, and infectious disease.<sup>ii</sup> A diagnosis of RAS can only be made if other causes are present. of aphthous stomatitis were identified, considered, and discarded.

## 2.Pathogenesis of RA:

The pathogenesis of RAS has not yet been fully elucidated. Possible triggering factors include genetic predisposition, viral and bacterial infections, food allergies, vitamins and trace elements.

Deficiency symptoms, systemic diseases (e.g. celiac disease, Crohn's disease, ulcerative colitis, AIDS), increased oxidative stress, hormonal imbalance, mechanical injury, anxiety (Bilgili et al. 2013; Field and Allan 2003; Koybasi et al. 2006; McCullough et al. 2007; Natah et al. 2004; Scully and Porter 2008).<sup>iii</sup>

## 3.Clinical Features and Stages of Disease RAS:

Recurrent aphthous stomatitis (RAS), or what is commonly called "stomatitis", is a type of benign inflammation of the mouth. The term "stomatitis" is often used by patients to describe an abnormality in the mouth, but strictly speaking, the term refers to painful open mouth sores that appear and disappear over time ( wound). Ulcers are considered mild if they are less than 1/2 inch and heal within 2 weeks without scarring, and are considered severe if they are larger than 1/2 inch and take longer than 2 weeks to heal and leave scars. is done. Some patients develop multiple small, painful, punctate sores called herpetic RAS. Such ulcers are not associated with herpes virus infection. A patient is considered to have severe her RAS if she has persistent ulceration with few, if any, ulcer-free periods, regardless of the size and/or number of lesions.<sup>iv</sup>

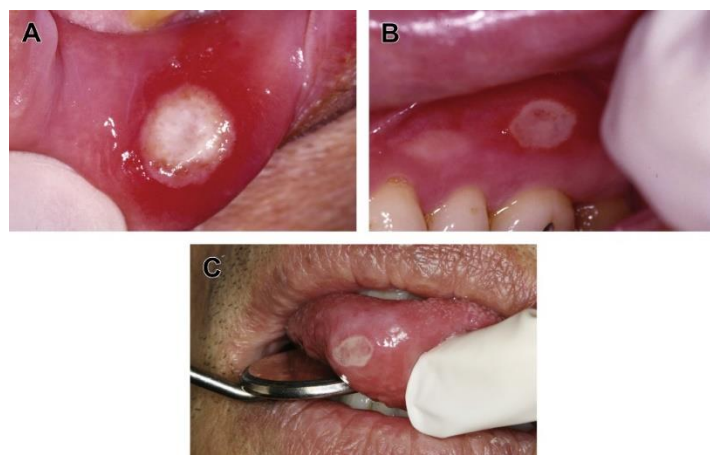


Fig. Clinical presentation of aphthous stomatitis

#### 4. Microscopic characteristics of RAS:

The microscopic appearance of aphthous ulcers is nonspecific and diagnosis must be based on history and careful laboratory examination. The mucosa of an aphthous ulcer exhibits necrosis of superficial tissue with a fibrinopurulent membrane covering the ulcer area. Necrosis is covered with tissue debris and neutrophils. The epithelium is infiltrated by lymphocytes and a few neutrophils. A strong inflammatory cell infiltrate, predominantly neutrophils are present just below the ulcer, and mononuclear lymphocytes are seen in adjacent areas. Minor salivary glands are commonly present in areas of aphthous ulcers and exhibit focal periductal and perialveolar fibrosis and chronic inflammation.

#### 5. Diagnosis of RAS:

is based on history, clinical manifestations along with histopathology. Other causes of recurrent oral ulcers should be ruled out. Systemic diseases presenting with recurrent oral ulcers were summarized. The diagnostic criteria for mild RAU were developed by Natah et al. Proposed.<sup>v</sup> 2004. They proposed that the diagnosis of idiopathic and secondary RAU (associated with systemic disease) is made when four major and one minor criteria are met.

An experienced dentist can usually diagnose her with RAS based on the appearance and location of the ulcer and your description. In some cases, a biopsy is done to rule out other disorders. Blood tests may be ordered to rule out some of the above conditions.<sup>vi</sup>

#### 6. Management of RA:

Very rarely, her RAS can be cured simply by correcting the underlying deficiency or avoiding certain foods. The goal of the vast majority of patients experiencing her RAS of unknown cause is to reduce the severity and/or frequency of painful ulcers. Unfortunately, there is no cure for RAS. Milder cases can be treated simply by covering the ulcer with a protective ointment (such as Orabase<sup>TM</sup>), a pharmaceutically strong cyanoacrylate (a "superglue-like substance"), and Oradisc<sup>TM</sup>. A local anesthetic (such as viscous lidocaine). can be used for temporary pain relief. Many over-the-counter medications (such as Orajel<sup>TM</sup> and Zylactin<sup>TM</sup>) contain a powerful local anesthetic called benzocaine. In your research, you may find that many other substances are said to be effective, but research has not shown them to be consistently effective.<sup>vii</sup>

#### 7. Conclusion:

Recurrent aphthous stomatitis is a very common recurrent painful ulcer that occurs in the oral cavity. The etiology of this disease is still unknown. Treatment strategies should aim to reduce symptoms by relieving pain, prolonging ulcer-free periods, and promoting ulcer healing.<sup>viii</sup>

Availability of data and materials-

Not applicable.

Ethics approval and consent to participate-

Not applicable.

Patient consent for publication-

Not applicable.

Competing interests- The authors declare that they have no competing interests.

#### REFERENCES

1. Scully C, Porter S. Oral mucosal disease: Recurrent aphthous stomatitis. *Br J Oral Maxillofac Surg*. 2008;46:198–206. [PubMed] [Google Scholar]
2. Belenguier-Guallar I, Jiménez-Soriano Y, Claramunt-Lozano A. Treatment of recurrent aphthous stomatitis. A literature review. *J Clin Exp Dent*. 2014;6(2):e168–e174. [PMC free article] [PubMed] [Google Scholar]
3. Slebioda Z, Szponar E, Kowalska A. Etiopathogenesis of recurrent aphthous stomatitis and the role of immunologic aspects: literature review. *Arch Immunol Ther Exp (Warsz)*. 2014 Jun;62(3):205-15. doi: 10.1007/s00005-013-0261-y. Epub 2013 Nov 12. PMID: 24217985; PMCID: PMC4024130.
4. <https://www.brighamandwomens.org/assets/BWH/surgery/oral-medicine-and-dentistry/pdfs/recurrent-aphthous-stomatitis-bwh.pdf>
5. Natah SS, Kontinen YT, Enattah NS, Ashammakhi N, Sharkey KA, Häyrynen-Immonen R. Recurrent aphthous ulcers today: A review of growing knowledge. *Int J Oral Maxillofac Surg* 2004;33:221-34.
6. Shafer, Hine, Levy. *A Textbook of Oral Pathology*. 4<sup>th</sup> ed. New Delhi: Saunders; 1997
7. <https://www.brighamandwomens.org/assets/BWH/surgery/oral-medicine-and-dentistry/pdfs/recurrent-aphthous-stomatitis-bwh.pdf>
8. Nolan A, Baillie C, Badminton J, Rudralingam M, Seymour RA. Efficacy of topical hyaluronic acid in the management of recurrent aphthous ulceration *J Oral Pathol Med* 2006;35:461-5.
9. Edgar NR, Saleh D and Miller RA: Recurrent aphthous stomatitis: A review. *J Clin Aesthet Dermatol* 10: 26-36, 2017.
10. Preeti L, Magesh K, Rajkumar K and Karthik R: Recurrent aphthous stomatitis. *J Oral Maxillofac Pathol* 15: 252-256, 2011.
11. Jin LJ, Lamster IB, Greenspan JS, Pitts NB, Scully C and Warnakulasuriya S: Global burden of oral diseases: Emerging concepts, management and interplay with systemic health. *Oral Dis* 22: 609-619, 2016.
12. BMJ Best Practice: Aphthous ulcers 2018. <https://bestpractice.bmj.com/topics/en-us/564/guidelines>. Accessed April 26, 2018.
13. Shulman JD, Beach MM, Rivera-Hidalgo F: The prevalence of oral mucosal lesions in U.S. adults: data from the Third National Health and Nutrition Examination Survey, 1988-1994. *J Am Dent Assoc* 135: 1279-86, 2004.
14. Shulman JD: Prevalence of oral mucosal lesions in children and youths in the USA. *Int J Paediatr Dent* 15: 89-97, 2005.

15. Davatchi F, Tehrani-Banihashemi A, Jamshidi AR, ChamsDavatchi C, Gholami J, Moradi M, Akhlaghi M, Foroozanfar MH, Barghamdi M, Noorolahzadeh E, et al: The prevalence of oral aphthosis in a normal population in Iran: a WHO-ILAR COPCORD study. *Arch Iran Med* 11: 207-209, 2008.
16. Safadi RA: Prevalence of recurrent aphthous ulceration in Jordanian dental patients. *BMC Oral Health* 9: 31, 2009.
17. Patil S, Reddy SN, Maheshwari S, Khandelwal S, Shruthi D and Doni B: Prevalence of recurrent aphthous ulceration in the Indian Population. *J Clin Exp Dent* 6: e36-e40, 2014.
18. Wang H, He F, Xu C, Fang C and Peng J: Clinical analysis for oral mucosal disease in 21 972 cases. *Zhong Nan Da Xue Xue Bao Yi Xue Ban* 43: 779-783, 2018 (In Chinese).
19. Akintoye SO and Greenberg MS: Recurrent aphthous stomatitis. *Dent Clin North Am* 58: 281-297, 2014.
20. Chavan M, Jain H, Diwan N, Khedkar S, Shete A and Durkar S: Recurrent aphthous stomatitis: A review. *J Oral Pathol Med* 41: 577-583, 2012.
21. Gallo Cde B, Mimura MA and Sugaya NN: Psychological stress and recurrent aphthous stomatitis. *Clinics (Sao Paulo)* 64: 645-648, 2009.
22. Rivera C: Immune system and zinc are associated with recurrent aphthous stomatitis. An assessment using a network-based approach. *J Oral Res* 6: 245-251, 2017.
23. Wu J, Chen ZP, Shang AQ, Wang WW, Chen ZN, Tao YJ, Zhou Y and Wang WX: Systemic bioinformatics analysis of recurrent aphthous stomatitis gene expression profiles. *Oncotarget* 8: 111064-111072, 2017.
24. Mimura MAM, Borra RC, Hirata CHW and de Oliveira Penido N: Immune response of patients with recurrent aphthous stomatitis challenged with a symbiotic. *J Oral Pathol Med* 46: 821-828, 2017.