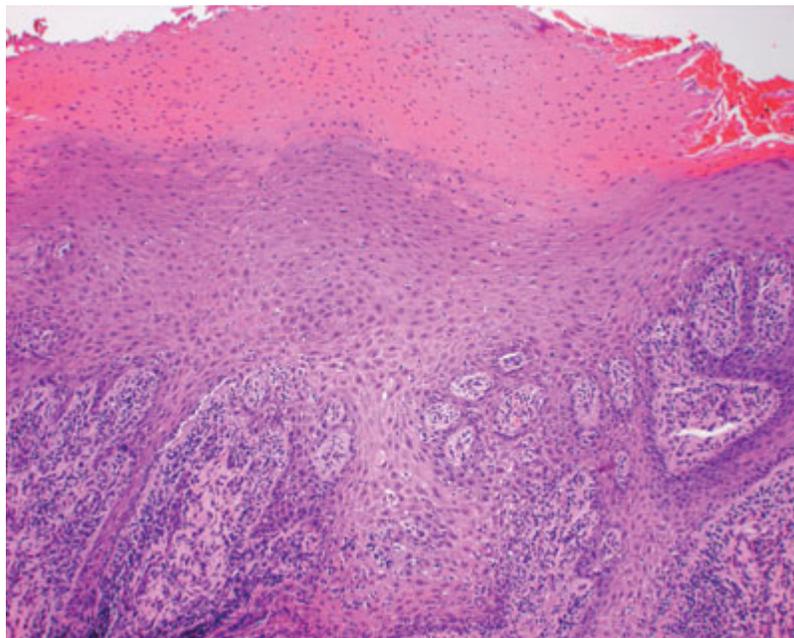


## Median rhomboid glossitis

Brenda L. Nelson, DDS;  
Lester D.R. Thompson, MD, FASCP



*Figure 1. This well-demarcated erythematous area on the posterior tongue represents a partial loss of the filiform papillae.*



*Figure 2. Remarkable pseudoepitheliomatous hyperplasia of the squamous epithelium is seen on intermediate magnification. Parakeratosis is noted, and mixed inflammation is predominant in the stroma of this H&E-stained material.*

Median rhomboid glossitis—also known as *central papillary atrophy* and *posterior midline atrophic candidiasis*—is a type of erythematous candidiasis unique to the midline posterior tongue. It occurs in as many as 1% of adults.

This condition was once thought to represent a developmental defect. The embryonic tongue is formed when the lateral processes meet in the midline and fuse over the tuberculum impar. In some cases, the posterior dorsal point of fusion is abnormal, resulting in the development of an area of smooth, erythematous mucosa lacking papillae. This area is more susceptible to recurring, chronic atrophic candidiasis. Today, however, most authors do not subscribe to the embryogenesis theory. Instead, they believe that median rhomboid glossitis is related to an infection of *Candida albicans*, which is the most common fungal organism of the oral cavity.

Candidiasis is exceedingly common. *C. albicans* is a component of the oral flora in up to 50% of the population; most of these individuals show no clinical evidence of disease. Symptomatic candidiasis is associated with numerous conditions, including nutritional deficiencies, diabetes, xerostomia, and immune deficiencies and disorders. Symptomatic candidiasis may occur in healthy individuals who have no predisposing factors. Men are affected more often than women (3:1), and adults more often than children.

Clinically, median rhomboid glossitis manifests as a well-delineated erythematous area located along the midline posterior dorsal tongue just anterior to the circumvallate papillae (figure 1). This area represents a zone of atrophic filiform papillae. Its rhomboid shape usually “points” in an anteroposterior direction. Additionally, it is not unusual in median rhomboid glossitis to have a “kissing lesion,” or area of roughness, most commonly in the area of the hard and soft palate where the tongue generally rests against the palate.

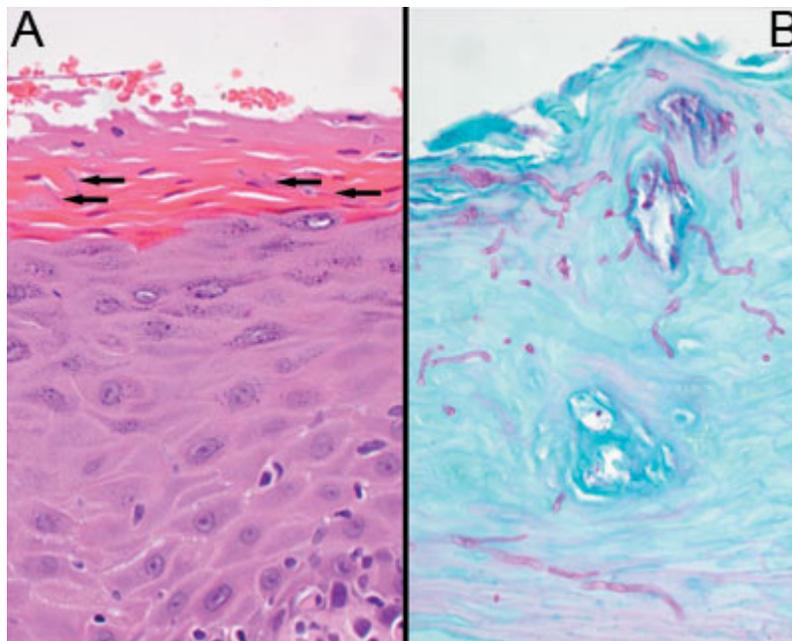


Figure 3. *Candida* fungal hyphae are seen in median rhomboid glossitis. The organisms (arrows) can be seen on an H&E-stained section (A) (original magnification  $\times 300$ ), but they are usually easier to identify with PAS/light green (B) or another fungal stain.

Histologically, an atrophic to hyperplastic squamous epithelium overlies an inflamed stroma (sometimes with microabscesses); excess keratin and parakeratosis can be present (figure 2).

Fungiform and filiform papillae are absent. Candidal organisms are generally identifiable on conventional hematoxylin and eosin (H&E) slides (figure 3, A). However, to highlight the fungal wall, staining with periodic acid–Schiff (PAS) (figure 3, B) or Gomori methenamine silver (GMS) will result in a dramatic bright magenta (PAS) or black (GMS). The hyphae are tubular, vary in length, and may show branching.

Median rhomboid glossitis is clinically evident, and it is usually diagnosed and treated empirically. However, several other entities may be considered in the differential diagnosis: irritation fibroma, mucocele, granular cell tumor, tertiary syphilis, lingual thyroid (usually further posterior) and, in rare cases, squamous cell carcinoma. Most of these conditions can be easily ruled out on the basis of clinical appearance.

The treatment for median rhomboid glossitis is essentially the same as the treatment for oral candidiasis. The numerous antifungal agents that have been developed have a variety of side effects. Potential adverse reactions and drug interactions should be discussed with the patient's primary care physician before any particular agent is prescribed. Sometimes therapy before biopsy will reduce the reactive epithelial hyperplasia that can confound the diagnosis.

### **Suggested reading**

Bouquot JE, Gundlach KK. Odd tongues: The prevalence of common tongue lesions in 23,616 white Americans over 35 years of age. *Quintessence Int* 1986;17(11):719-30.

Brown RS, Krakow AM. Median rhomboid glossitis and a "kissing" lesion of the palate. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1996;82(5):472-3.

Terai H, Shimahara M. Atrophic tongue associated with Candida. *J Oral Pathol Med* 2005;34(7):397-400.



From the Department of Pathology, Naval Medical Center, San Diego (Dr. Nelson), and the Department of Pathology, Woodland Hills Medical Center, Southern California Permanente Medical Group, Woodland Hills, Calif. (Dr. Thompson).

---