

Median Rhomboid Glossitis: Co-Infection by *Candida albicans* and *Staphylococcus aureus* (Case Report)

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ABSTRACT

Median rhomboid glossitis is a disorder of the tongue thought to be induced by *Candida* species. It is seen as an ovoid or rhomboid area of erythema on the posterior aspect of the dorsum of the tongue. Most cases are asymptomatic and the condition is innocuous. However, the striking erythematous appearance may be a cause for alarm to the patient. As such, clinicians need to be familiar with this condition. We report a case of median rhomboid glossitis due to co-infection by *Candida albicans* and *Staphylococcus aureus* and propose that such co-infection may be responsible for incomplete resolution of some cases of median rhomboid glossitis following treatment.

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INTRODUCTION

Median rhomboid glossitis (MRG), also known as central papillary atrophy is an uncommon lesion on the dorsum of the tongue (Mojarrad & Vaziri, 2008; Goregen et al., 2011). Nigerian studies investigating tongue disorders have either documented few or no cases of MRG (Sawyer et al., 1984; Okoh et al., 2015). It presents clinically as an area of erythema in the midline of the dorsum of the tongue, anterior to the sulcus terminalis, due to loss of the filiform papillae (Rogers & Bruce, 2004). Majority of cases are asymptomatic; some patients however complain of itching or a burning sensation (Nath & Rath, 2018). It was initially thought to be of developmental origin (Rogers & Bruce, 2004). However, it is now widely accepted to be the result of colonization of the tongue by *Candida* species, although *Actinomyces* infection has also been implicated (Deshpande & Bharucha, 1991). We report a case of median rhomboid glossitis as a result of co-infection of *Candida albicans* and *Staphylococcus aureus*.

CASE REPORT

A case of a 56-year old woman who presented on account of a change in the colour and appearance of part of her tongue, of 3 weeks duration. This was accompanied by a peppery sensation, slipperiness and difficulty with

swallowing. However, there was no alteration in taste. Further interview revealed that she was worried about the possibility of the lesion being a cancer.

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On examination, there was an ovoid area of depapillation in the midline of the dorsum of the tongue, measuring about 5cm by 2cm (Figure 1).

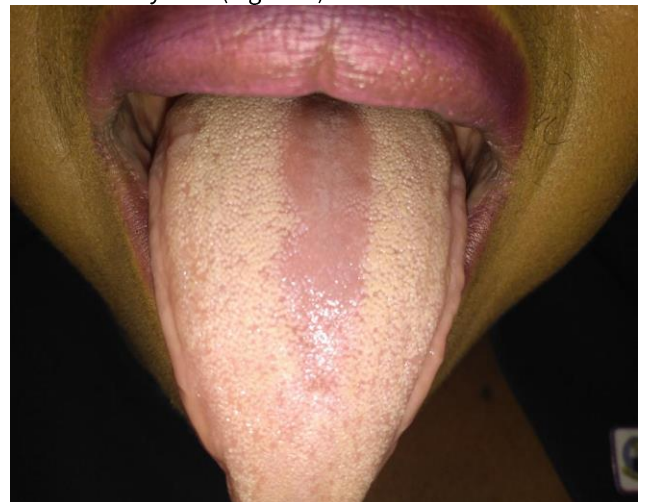


Figure 1: Patient at presentation

A diagnosis of median rhomboid glossitis was made. Swabs were taken from the lesion for microscopy, culture and sensitivity (MCS) as well as Mycology. She was counselled, and placed on fluconazole 100mg daily (empirically). Culture yielded heavy growth of *Staphylococcus aureus* together with moderate growth of *Candida albicans*. As such, amoxicillin 500mg 8 hourly was added to the drug regimen.



Figure 2: A week after commencement of medications. Regeneration of the filiform papillae has already begun

On review appointment a week after, all the symptoms had disappeared, and there was slight improvement in the appearance of the tongue (Figure 2). The drug regimen was maintained, and a 2-week review appointment was given, for which she did not show up. She however presented a week after (4 weeks post initial presentation). There were no complaints, and examination showed significant regeneration of the papillae over the affected area (Figure 3).

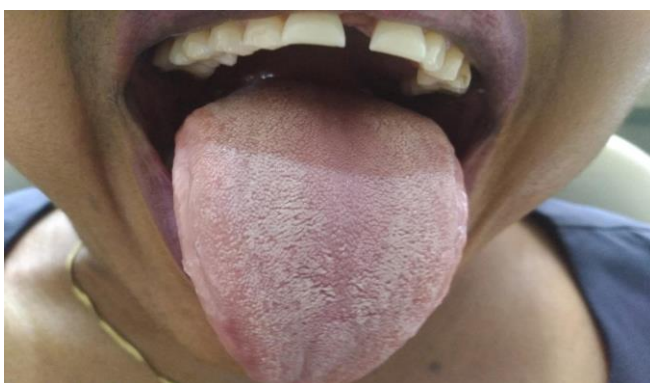


Figure 3: Marked regeneration of the filiform papillae on the dorsum of the tongue four weeks after initial presentation

DISCUSSION

Examination of the tongue is an essential component of intraoral examination and should be carried out carefully and systematically. The tongue may provide clues to a

systemic disorder. Besides, a range of localized conditions affect the tongue, which clinicians need to be familiar with. Median rhomboid glossitis is a relatively uncommon disorder of the tongue, occurring in < 1% of the general population (Rogers & Bruce, 2004). It was initially thought to be a developmental disorder resulting from failure of fusion of the tuberculum impar with the lateral tongue processes during development of the tongue (Martin & Howe, 1938; Yarom et al., 2004). However, such an aetiology is no longer tenable, considering the relative rarity of the condition in children compared to adults (Redman, 1970; Martin & Howe, 1938; Motalebnejad et al., 2008). In 1975, Cooke attributed MRG to be the result of candidiasis. Since then, other authors have substantiated an infectious aetiology, with *candida spp* being mostly implicated. *Actinomyces spp* has been implicated in a case report (Deshpande & Bharucha, 1991). Predisposing factors for MRG include diabetes mellitus, tobacco smoking and denture use (Goregen et al., 2011)

Our case report lends support to an infectious origin for MRG. To the best of our knowledge, co-infection by *Candida albicans* and *Staphylococcus aureus* has not previously been reported in MRG. However, such co-infection is seen commonly in angular cheilitis (Neville et al., 2015; Ohman et al., 1986; Oza & Doshi, 2017). We therefore propose that in cases of MRG, microbiological investigation should include culture for bacteria, especially *Staphylococcus spp*. It is possible that some of the cases which fail to regress may be the result of inadequate treatment due to co-infection between *Candida albicans* and other bacteria such as *Staphylococci* and *Actinomyces*.

CONCLUSION

Although usually asymptomatic, some cases of MRG may be associated with itching, pain or a burning sensation. This, coupled with the striking clinical appearance of erythema, may be a cause for alarm to the patient, as noted in this case. As such, it is important for clinicians to be familiar with this condition and its innocuous nature. This will place them in better stead to be able to offer good counsel and help relieve patient anxiety.

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