

Oral Fungal Infections

Diagnosis and Management



David R. Telles, DDS^{a,b,c,d,e,*}, Niraj Karki, MD^{f,g}, Michael W. Marshall, DDS, FICD^{b,c,h}

KEYWORDS

- Candidiasis • Oral thrush • Oral fungal infection • Mucormycosis • Histoplasmosis
- Blastomycosis • Aspergillosis • Geotrichosis

KEY POINTS

- Most solitary or primary oral fungal infections are rare with the exception of oral candidiasis.
- Candidiasis is the leading infection that most dental practitioners will see in clinical practice.
- Unless diagnosed early and treated aggressively, mucormycosis can be a locally invasive and disfiguring oral and maxillofacial fungal infection.
- This review includes several oral and maxillofacial fungal infections, including mucormycosis, candidiasis, aspergillosis, blastomycosis, histoplasmosis, cryptococcosis, and coccidioidomycosis.

INTRODUCTION

Fungal infections are of great concern in dentistry. Patients may present with infections that can be superficial or indicative of a more serious systemic illness. This article focuses on fungal infections that can range from primary (superficial) to disseminated infections that have a high mortality. Included in the review are the most common oral and maxillofacial fungal infections, route of spread, diagnosis, treatment as well

The authors have nothing to disclose.

^a Oral & Maxillofacial Surgery, Herman Ostrow USC School of Dentistry, 925 West 34th, Street, Los Angeles, CA 90089, USA; ^b Oral & Maxillofacial Surgery, Private Practice: Huntington Beach Oral & Maxillofacial Surgery, 7677 Center Avenue, Suite 206, Huntington Beach, CA 92647, USA; ^c Long Beach Memorial Medical Center, 2801 Atlantic Avenue, Long Beach, CA 90806, USA; ^d Orange Coast Memorial Medical Center, 9920 Talbert Avenue, Fountain Valley, CA 92708, USA; ^e Orange County Global Medical Center, 1001 N Tustin Avenue, Santa Ana, CA 92705; ^f Infectious Diseases, Internal Medicine, University of New England College of Osteopathic Medicine, 11 Hills Beach Road, Biddeford, ME 04005, USA; ^g Infectious Diseases, The Aroostook Medical Center, 140 Academy Street, Presque Isle, ME 04769M, USA; ^h Oral & Maxillofacial Surgery, Division of Otolaryngology, UCI School of Medicine, 101 The City Drive South, Orange, CA 92868, USA

* Corresponding author. Oral & Maxillofacial Surgery, Private Practice: Huntington Beach Oral & Maxillofacial Surgery, 7677 Center Avenue, Suite 206, Huntington Beach, CA 92647.

E-mail address: drtelles@hbomfs.com

Dent Clin N Am 61 (2017) 319–349
<http://dx.doi.org/10.1016/j.cden.2016.12.004>

dental.theclinics.com

0011-8532/17/© 2017 Elsevier Inc. All rights reserved.

as prevention. Although uncommon in a dental practice setting, one may encounter fungal infections, such as candidiasis, mucormycosis, histoplasmosis, blastomycosis, aspergillosis, cryptococcosis, geotrichosis and coccidioidomycosis. **Table 1** is a broader and comprehensive list of potential oral and maxillofacial fungal infections to serve as reference if one encounters an uncommon organism not covered in this article.

CANDIDIASIS

Candida is a dimorphic yeast (fungus) found commonly in the gastrointestinal tract of humans and as normal flora of the skin and mucous membranes. In its normal form, *Candida* is not pathogenic and stays in balance such that it cannot progress to cause infection. Typically, *Candida* infections occur when one of several scenarios happen, including but not limited to, host defenses becoming compromised, a breakdown of the normal skin or mucosal barrier, a disturbance of the host by external factors (such as intake of broad-spectrum antibiotics), or other internal/external risk factors increasing the likelihood of a *Candida* infection. The *Candida* species consists of 2- to 6- μm yeastlike organisms that reproduce through budding.¹ The genus *Candida* includes more than 200 species, most of which are not pathogenic in humans.² The most common *Candida* species encountered is *Candida albicans* and accounts for more than 90% of oral cavity isolates.^{3,4} Other common *Candida* species encountered with human pathogenicity include *Candida parapsilosis*, *Candida tropicalis*, *Candida glabrata*, *Candida krusei*, *Candida guilliermondii*, and *Candida lusitanae*.⁴ In healthy individuals, *Candida* spp is reported to be present in 25% to 75% of the population in the absence of any lesion caused by *Candida*.^{5,6}

Candidiasis can present in several forms of infection depending on how deeply the organism has spread, or if host defenses allow for more substantial infections. The most commonly encountered infection from *Candida* is oral thrush, also known as pseudomembranous candidiasis. This type of infection is typically characterized by a white cottage cheese–like film that clinically can be wiped off to reveal a base that

Table 1			
Superficial and deep oral and maxillofacial fungal infections			
<i>Superficial mycoses</i>		<i>Deep mycoses</i>	
Candidiasis		Subcutaneous	
Hyperplastic	Stomatitis	Sporotrichosis	Entomophthoromycosis
Erythematous	Median rhomboid glossitis	Lobomycosis	Chromomycosis
Pseudomembranous	Cutaneous	Rhinosporidiosis	
Angular cheilitis	Pneumonia		
<i>Deep systemic mycoses</i>			
Histoplasmosis	Blastomycosis	Coccidioidomycosis	Paracoccidioidomycosis
Cryptococcosis			
<i>Deep opportunistic</i>			
Aspergillosis	Mucormycosis	Geotrichosis	Trichosporon
Penicilliosis	Basidiomycosis	Cephalosporiomycosis	Paecilomycosis
Alternariosis	Cercosporomycosis	Fusariomycosis	

Various potential oral and maxillofacial fungal infections; all bolded are included in the focus of this article.

Courtesy of D.R. Telles, DDS, Huntington Beach, CA.

Download English Version:

<https://daneshyari.com/en/article/5638745>

Download Persian Version:

<https://daneshyari.com/article/5638745>

[Daneshyari.com](https://daneshyari.com)