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STANDARD TREATMENT GUIDELINES 2022



Oral Thrush (Oral Candidiasis)

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Oral Thrush (Oral Candidiasis)

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Introduction

Common oral yeast infection presents as white patches in baby's mouth and make sucking and feeding uncomfortable; common in infants, especially with poor oral hygiene.

- ☑ Pseudomembranous oropharyngeal candidiasis
- ☑ Angular cheilitis
- ☑ Acute atrophic candidiasis.
- ☑ Oral thrush is a condition in which white curdish-like lesions are present on the buccal mucosa, tongue, palate, and gingiva (**Figs. 1A and B**).
- ☑ The lesions are difficult to scrape off and this differentiates it from milk. After scraping, there is an erythematous base and some bleeding. Infants with thrush may present with pain, poor feeding, or fussiness, but patients are more often asymptomatic and thrush presents no interference with eating.
- ☑ Esophagitis due to *Candida* infection may present with chest pain and poor feeding. Oral candidiasis may be associated with diaper candidiasis, so it is always important to check for diaper rash when thrush is present.

Types

Types



Figs. 1A and B: Curdish-like lesions.

- ☑ An overgrowth of yeast can occur when either normal host immunity or normal host flora has been disrupted. Yeast overgrowth on the oral mucosa causes the epithelial cells to desquamate. Bacteria, keratin, and necrotic tissue accumulate and form a pseudomembrane.
- ☑ *Candida albicans* accounts for about 90% of human yeast infections. Other species that may cause oral thrush include *C. glabrata*, *C. krusei*, and *C. tropicalis*, although *C. albicans* is often present with them. Candidal infections most commonly affect the skin (especially the diaper area and abdominal fat folds), nails, mouth, and vagina, but can also present in the ear canal, lungs, bladder, eyes, central nervous system (CNS), heart, liver, or other parts of the gastrointestinal (GI) tract.
- ☑ Neonates with thrush have usually been colonized when they passed through the birth canal, but other sources of transmission may include colonized breasts, hands, or bottle nipples. Thrush can also develop in older children as an adverse effect from inhaled corticosteroids for asthma. Immunosuppressed patients may also develop *Candida* esophagitis.

Pathophysiology

- ☑ The typical colonization rate of *C. albicans* varies with age; neonates (45%); in healthy children 45–65%. Thrush usually appears at about 1 week of age. Thrush is a disease of infants, and in older children it is associated with the use of antibiotics.
- ☑ Recurrent or persistent thrush should raise the suspicion of a possible underlying immunodeficiency syndrome. Thrush can be the first presenting sign of human immunodeficiency virus (HIV) infection.
- ☑ Immunosuppressed patients are more susceptible to oral candidiasis, as well as cutaneous and systemic infections.

- ☑ If left untreated, oral candidiasis will resolve in 3–8 weeks, but in most instances, topical antifungal agents are used. Mild cases may be watched without treatment. In nursing mothers, the breast may be a reservoir for the yeast so that the application of a topical antifungal between feeds to the breast may help eradicate the infection.
- ☑ Always continue checking for diaper dermatitis it is often associated with oral *Monilial* infection.
- ☑ Nystatin oral suspension is the drug of choice for oral candidiasis. Various reports have reported cure rates between 50 and 80% on standard 100,000 units per dose four times a day. May have to double the dose or apply it directly to the lesions with a cotton swab. Nystatin does not adhere well to the lesions and is swallowed rapidly and this interferes with its efficacy. For infants, parents can apply 1–2 mL of the solution inside each cheek between meals or directly to the lesions with a swab. Application may be continued for 10–14 days.
- ☑ Older children can swish nystatin suspension around in their mouth and swallow it.
- ☑ Gentian violet has been shown to be effective as a second-line agent for oral candidiasis resistant to nystatin, but is messy to use and should not be swallowed.
- ☑ Other medications used are clotrimazole and miconazole mouth paints.
- ☑ These oral application antifungals have little to no systemic absorption, so there are minimal adverse effects.
- ☑ *Oral thrush that is not responding to treatment:* Systemic antifungal like fluconazole for 14 days treatment may be considered.

Assessment of Severity

Standardized severity assessments for oropharyngeal candidiasis in children are lacking. We define severity clinically as follows:

- ☑ Mild thrush—involves <50% of the oral mucosa **and** absence of deep, erosive lesions
- ☑ Moderate/severe thrush—involves ≥50% of the oral mucosa **or** deep, erosive lesions
- ☑ For mild oropharyngeal candidiasis in immunocompetent children ≥12 months—local nystatin or clotrimazole
- ☑ For mild thrush in immunocompromised children ≥12 months and moderate/severe thrush in all children ≥12 months, recommend systemic rather than topical antifungal therapy. Drug of choice is fluconazole.

- ☑ If baby is bottle-feeding, sterilize teats and bottles after each use.
- ☑ If mother is breastfeeding, clean the nipples gently between feeds.
- ☑ Sterilize *dummies* and teething rings regularly.
- ☑ If the baby gets *nappy rash*, make sure to treat it properly.
- ☑ Use antibiotics only when necessary.
- ☑ If the child has *asthma*, make sure they wash their mouth with water after asthma preventer medications.
- ☑ If the child has diabetes, try to keep their blood sugar level within its target range.
- ☑ Wash clothing at 60°C to kill fungus.

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