STANDARD OPERATING PROCEDURE

Oral Candidiasis in HIV Patients

Special Region (1)

Union of Myanmar

Version: **1.0**

Effective Date: **March 2026**

Review Date: **March 2028**

Approved by: **Internal Medicine**

1. Introduction

Oral candidiasis is among the most common mucosal opportunistic infections in people living with HIV. It may be the first clinical clue to previously undiagnosed HIV infection, and in known HIV disease it can indicate advanced immunosuppression, poor antiretroviral therapy (ART) adherence, virological failure, or recent antibiotic or corticosteroid exposure. *Candida albicans* remains the most frequent pathogen, although non-albicans species become more important in patients with repeated azole exposure or refractory disease.

2. Why It Matters in HIV

- Oral candidiasis is strongly associated with impaired cell-mediated immunity and becomes more frequent when CD4 count falls below 200 cells/mm³.
- It is included among common conditions seen in advanced HIV disease and should trigger broader assessment for opportunistic infections, ART status, and immune suppression severity.
- Odynophagia or dysphagia raises concern for esophageal candidiasis, which requires systemic therapy.

3. Predisposing Factors

3.1 HIV-related Factors

- CD4 count <200 cells/mm³
- High HIV viral load
- Not on ART, interrupted ART, or treatment failure
- Previous recurrent mucosal candidiasis

3.2 Non-HIV Factors

- Recent broad-spectrum antibiotic use
- Systemic or inhaled corticosteroids
- Diabetes mellitus, malnutrition, xerostomia, smoking, poor oral hygiene, or dentures

4. Clinical Forms

Form	Typical appearance	Clinical notes
Pseudomembranous thrush	White curd-like plaques that can be wiped off, leaving an erythematous base	Commonest classic form
Erythematous / atrophic	Red, smooth, painful mucosa; often palate or tongue	May cause burning and taste disturbance
Angular cheilitis	Fissuring and soreness at mouth corners	May coexist with thrush
Hyperplastic candidiasis	White plaques that are not easily scraped off	Less common; consider differential diagnosis if persistent
Possible esophageal involvement	Odynophagia, dysphagia, retrosternal pain	Treat systemically; endoscopy if no response

5. Symptoms and Signs

- White removable plaques on tongue, palate, buccal mucosa, or oropharynx
- Oral soreness, burning mouth, altered taste, halitosis, dry mouth, or reduced oral intake
- Angular fissures at the lips
- Odynophagia or dysphagia suggesting esophageal candidiasis

6. Diagnosis

In most cases, diagnosis is clinical. Typical scrapable white plaques or compatible erythematous lesions in a patient with HIV are usually sufficient to start treatment.

7. Treatment

Treatment should be individualized according to severity, extent of disease, ability to swallow, prior azole exposure, pregnancy status, and likely drug interactions with antiretroviral or tuberculosis therapy.

Clinical situation	Preferred regimen	Duration	Comments
Mild to moderate oropharyngeal candidiasis	Fluconazole 100-200 mg orally once daily	7-14 days	Preferred first-line systemic therapy
Alternative topical therapy when disease is localized and swallowing is normal	Nystatin suspension 100,000 units/ml four-six times daily	7-14 days	Swish in mouth for at least 1-2 minutes, then swallow (important for oropharyngeal + oesophageal coverage)
Esophageal candidiasis	Fluconazole oral or IV preferred	14-21 days	Systemic therapy is required
Alternative for esophageal disease	Itraconazole oral solution	14-21 days	Capsules are less reliable because absorption is variable
Azole-refractory mucosal disease	Consider posaconazole, itraconazole solution, voriconazole, echinocandin, or amphotericin B depending on severity and availability	Usually 14-28 days depending on site and response	Send culture and susceptibility testing if possible

8. Monitoring Response

- Symptomatic improvement is usually expected within 3-5 days.
- Complete response is commonly achieved by 7-14 days for oral disease and 14-21 days for esophageal disease.
- Reassess adherence, diagnosis, drug interactions, fluconazole exposure history, and immune status if the patient is not improving.
- Consider resistant *Candida* species or an alternative diagnosis such as HSV, CMV esophagitis, aphthous ulcers, leukoplakia, or malignancy in refractory cases.

9. Prevention and Practical Advice

- Early diagnosis of HIV and prompt ART initiation remain the most important preventive measures.
- Encourage oral hygiene, denture care, smoking cessation, and review of inhaled steroid technique.

- Avoid unnecessary antibiotics where possible and treat contributing conditions such as diabetes or xerostomia.
- Routine long-term antifungal prophylaxis is generally not recommended unless there is a specific individualized indication.

10. References

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