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ESCMID FUNGAL INFECTION STUDY GROUP
European Society of Clinical Microbiology and Infectious Diseases

ESCMID Diagnostic & Management Guideline for Candida Diseases 2011

HIV and AIDS

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Transparency declaration

- Consultant to Gilead Sciences and received research grants or speaker's fees from Gilead Sciences, Merck, Pfizer, Astellas and Schering-Plough.

Introduction

- Mucosal candidiasis is mostly caused by *C. albicans*
- After long term fluconazole exposure, fluconazole or even multiply azole resistant *C. albicans* may occur
- Intrinsically less azole susceptible species may occur such as *C. glabrata*
- Oropharyngeal but not vaginal candidiasis is a marker of immune deficiency

Primary prophylaxis of mucosal candidiasis (OPC/Oesophagitis)

Recommendation		Reference
There is no indication of primary antifungal prophylaxis of OPC in Europe although effective [interactions/acute therapy effective/induction of resistance/no mortality related to OPC/cost)	DIII	Powderly NEJM 1995 Schuman Ann Intern Med 97 Havlir CID 1998 Goldman CID 2005
The best prophylaxis is the appropriate compliance to HAART	AI	

Treatments of oropharyngeal candidiasis (OPC) Summary

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Proposal	Rec	References
Local treatments with AmB or nystatin should be discouraged (HIV+)	DIII	
Clotrimazole not available in several European countries		
Fluconazole (100mg/d, 7-14d) 1st line therapy	AI	Pons 1993,1997 Koletar 1990, Sangeorzan
Miconazole mucoadhesive tablet	BII	Van Roey JAIDS 2004, Not approved in all European countries
Alternatives (other azoles/echinocandins) should not be used as 1st line therapy	DIII	
Ampho B i.v. should never be used	DIII	
Chronic suppressive therapy unnecessary	DIII	
HAART should be initiated **(HIV+)**	AI	

Other systemic azoles than fluconazole during OPC

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Recommendation	Reco	Reference
Itraconazole oral solution (200 mg/d): should not be used as first line therapy (GI tract disturb/erratic absorption/drugs interaction); only in refractory OPC and in case of fluconazole resistance	CI AII	
Itraconazole capsules (poor absorption)	DIII	Cartledge JAC 1997
Voriconazole (200 mg bid): should not be used as first line therapy (it as effective as fluconazole and higher side effects rate)	CII	Ruhnke AAC 1997
Position of posaconazole (400 mg/ twice daily): should not be used as first line therapy; recommended in refractory OPC in case of fluconazole resistance	BI AII	Vasquez CID 2006 Vasquez HIV CT 2007 Skiest CID 2007

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Treatments of oesophageal candidiasis Summary

Proposal	Rec	References
Start treatment without endoscopy	AIII	
No local treatments; only systemic agents	DIII	
Oral fluconazole (200-400 mg/d for 14-21d): 1st line therapy	AI	De Wit 1989
Deoxycholate amphotericin i.v.(0.3-0.7 mg/kg/d) should no longer be used	CIII	
Echinocandins can be used in patients who cannot swallow but not better than fluconazole (or favour micafungin 150 mg/d as it is the only EMEA approved echinocandin? But higher relapse rate than fluconazole also true for anidulafungin	BI	De Wet CID 2004 Krause CID 2004
Itraconazole oral solution as an alternative	BI	
Posaconazole (400 mg bid) or voriconazole (200 mg bid) or any echinocandin not considered 1st line therapy but considered in refractory or fluconazole resistant cases	AII(posa)/ CII(echino)/ CIII (vori)	Ally CID 2001
Suppressive therapy (Fluconazole 100-200 mg 3x/w) if recurrent infections	BI	

Secondary prophylaxis of mucosal candidiasis

Proposal	Rec	Reference
Not recommended	DIII	
Fluconazole maintenance therapy (7 randomized studies) should be reserved to patients failing HAART therapy with relapsing OPC after HAART optimization & susceptible isolate [doses ranging : 50-200 mg/d, and from 150 mg-400 mg/week	BI	Leen J Infect 1990 Stevens Arch Int Med 1991 Just Nubling EJCMID 1991 Mariott Med J Aust 1993 Schuman Ann Int Med 97 Havlir CID 1998 Pagani JAC 2002
Favour daily administration of fluconazole if esophagitis	BI	
Oral posaconazole b.i.d. if esophagitis	BII	

Vulvovaginal candidiasis

- Topical azoles if uncomplicated. AII
- Oral fluconazole (150 mg/wk) for recurrences. AIII

Interaction between azoles and HAART

- Azoles are Cyp3A inhibitors and thus ARV concentrations may increase
- Itraconazole concentrations may increase with protease inhibitors
- Non-nucleoside inhibitors decrease azole concentrations (itraconazole and voriconazole)
- Azoles increase maraviroc but not raltegravir concentrations