

Candidiasis

Is	Any infection caused by any species of Candida.	
Candida	Shape	unicellular yeast fungus
	Reproducing	by budding
	L/M	Budding yeast cells & Pseudohyphae
	Culture gross	Creamy white colony, fast growing (1-2D) (seen by stains: KOH & stained smears)
	Stains	Gram stain / KOH / Giemsa / GMS / PAS / stained smears
	Agar	Sabouraud Dextrose & Blood (37°C) -ChromAgar: used to differentiate the species depending on colony color
	Species #	>150
	Imp species	Candida albicans, C.parapsilosis, C.tropicalis, C.glabrata & C.krusei,
	Human commensal sites	-meaning normal flora that both the flora and us benefit of each other -Oral -Skin -GIT -Genitourinary
Rank	-most common invasive fungal inf in immunocompromised -4th most common cause of nosocomial blood stream infection	
Opportunistic conditions	-Alteration of: Immunity, Normal physiology or Normal flora -Damage in the barriers (skin damage...)	
Biopsy	depend on inf site: Swabs, Urine, Blood, lungs, CSF...	
Diagnosis	-Biopsies: Biopsy & staining / biopsy & culture / blood culture -Serology: seeing this Ag or its Ig (Mannan) using ELISA -PCR -tests ↓	
Diagnose C. albicans specifically	<p>-it has its own tests cuz it's the commonest infector of candidas</p> <p>-if all these tests are +, it indicates C. albicans inf:</p> <ol style="list-style-type: none"> 1. Germ tube test: Formation of germ tube when cultured in serum at 37°C 2. Chlamydospores production in <u>corn meal Agar</u> 3. Resistance to <u>Cycloheximide</u> <p>-if all these tests are -, it excludes C. albicans, so we use those to detect whatever is the causer:</p> <p>-Carbs assimilations & fermentation test</p> <p>-Culture on Chromogenic Media</p>	

Inf site	Mucosal membranes	Thrush	-AKA: oropharyngeal - inf in the mouth -White Pseudo-membranous patches inside the moth, especially tongue -with erythema -common in infants & elders - & in AIDS pt
		Vagina	-AKA: Vulvovaginitis -Common in preg, DM or contraceptives users -white patches on vaginal mucosa. -Thick discharge & itching vagina
		Eso	-
	Cutaneous	Paronychia	in the skin around nails
		Onychomycosis	in nails themselves
		Diaper rash	where dippers normally are
		CMC	-Chronic mucotaneous candidiasis -in children with T-cell mutat
		Intertriginous	-Infections of skin folds (eg: axilla, buttock, toe web, under or breast) -Erythematous or whitish -dry or moist -itching and burning.
	other inf	UTIs	-
		Candidemia	-is candida in blood -etiology: Damage in host barriers (catheters, trauma, surgery) especially: Central venous catheters -disease: Septic shock, Meningitis & retinitis -only symptom: fever
		Disseminated "scattered"	-systemic or invasive (eg: Liver and spleen, Endophthalmitis "eyes", renal, Skin, Brain, Lungs & Bone)
		Pulmonary	-least common -etiology: <u>Aspiration</u> (inhaling food instead of air) or <u>Secondary</u> (due to Candidemia) -diagnosis: Bronchoalveolar lavage is not accurate We use: symptoms, radio & lab

Treatment	<p>Oropharyngeal Meds: Topical Nystatin / Clotrimazole / Miconazole / Fluconazole</p> <p>Vaginitis Meds: Miconazole / Clotrimazole / Fluconazole</p> <p>Systemic invasion Fluconazole / Voriconazole / Caspofungin / Amphotericin B</p> <p>Candidemia</p> <ul style="list-style-type: none">- Remove catheters, if possible- keep doing blood cultures while treating, once you get a completely negative culture & the patient is completely symptoms-free, cont. the treatment for 2 more weeks, then stop <p>Antifungal susceptibility test is a test done only in those cases:-</p> <ul style="list-style-type: none">-fungi isolated from sterile samples (research mostly)-no response to treatment-recurrent inf <p>C. glabrata may be resistant to <u>fluconazole</u></p> <p>C. krusei is resistant to <u>fluconazole</u></p>
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