EUCAST AFST uudised 2014

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Esindatud ei ole (endiselt) Bulgaaria, Iirimaa, Küpros, Läti, Leedu, Ungari, Poola, Portugal, Rumeenia.

2014 vastu võetud dokumendid

- The updated EUCAST DEFINITIVE DOCUMENT EDef 9.2 Method for the determination of broth dilution minimum inhibitory concentrations of antifungal agents for conidia forming moulds

- Updated and new breakpoints

Rationale for EUCAST clinical breakpoints **Itraconazole and *Candida* spp.**

- Breakpoint review in drug resistant updates

Caspofungin & *Candida parapsilosis*

Muutused seente BP tabelis

Antifungal agent	MIC breakpoint (mg/L)													
	C. albicans		C. glabrata		C. krusei		C. parapsilosis		C. tropicalis		C. guilliermondii		Non-species related breakpoints[1]	
	S ≤	R >	S ≤	R >	S ≤	R >	S ≤	R >	S ≤	R >	S ≤	R >	S ≤	R >
Amphotericin B	1	1	1	1	1	1	1	1	1	1	IE	IE	IE	IE
Anidulafungin	0,03	0,03	0,06	0,06	0,06	0,06	0,002	4	0,06	0,06	IE[2]	IE[2]	IE	IE
Caspofungin	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	Note[3]	IE[2]	IE[2]	IE	IE
Fluconazole	2	4	0,002	32	-	-	2	4	2	4	IE[2]	IE[2]	2	4
Itraconazole	0,06	0,06	IE[2]	IE[2]	IE[2]	IE[2]	0,12	0,12	0,12	0,12	IE[2]	IE[2]	IE	IE
Micafungin	0,016	0,016	0,03	0,03	IE[4]	IE[4]	0,002	2	IE[4]	IE[4]	IE[4]	IE[4]	IE	IE
Posaconazole	0,06	0,06	IE[2]	IE[2]	IE[2]	IE[2]	0,06	0,06	0,06	0,06	IE[2]	IE[2]	IE	IE
Voriconazole	0.12[5]	0.12[5]	IE	IE	IE	IE	0.12[5]	0.12[5]	0.12[5]	0.12[5]	IE[2]	IE[2]	IE	IE

Märkused

MIC method (EUCAST standardised broth microdilution method)
Medium: RPMI1640-2% glucose, MOPS buffer
Inoculum: Final $0.5x10^5$ – $2.5x10^5$ cfu/mL
Incubation: 18-24h
Reading: Spectrophotometric, complete (>90%) inhibition for amphotericin B but 50% growth inhibition for other compounds
Quality control: C. parapsilosis ATCC 22019 or C. krusei ATCC 6258

Kommentaar 1:

Non-species related breakpoints have been determined mainly on the basis of PK/PD data and are independent of MIC distributions of specific species. They are for use only for organisms that do not have specific breakpoints.

Kommentaar 2: Itraconazole, fluconazole, anidulafungin & *Candida krusei, C. glabrata, C. guilliermondii*

The ECOFFs for these species are in general higher than for C. albicans.

Kommentaar 3: Kaspofungiini BP

Isolates that are susceptible to anidulafungin as well as micafungin should be considered susceptible to caspofungin, until caspofungin breakpoints have been established. Similarly, C. parapsilosis isolates intermediate to anidulafungin and micafungin can be regarded intermediate to caspofungin. EUCAST breakpoints have not yet been established for caspofungin, due to significant inter-laboratory variation in MIC ranges for caspofungin.

Kas rakendame Eestis soovitust mitte testida kaspofungiini tundlikkust, ehhinokandiini klassi ravimite tundlikkuse testimiseks määrata anidulafungiini ja mikafungiini MIK.

Kommentaar 4: Anidulafungin

MICs for C. tropicalis are 1-2 two-fold dilution steps higher than for C. albicans and C. glabrata. In the clinical study successful outcome was numerically slightly lower for C. tropicalis than for C. albicans at both dosages (100 and 150 mg daily). However, the difference was not significant and whether it translates into a relevant clinical difference is unknown.
MICs for C. krusei are approximately three two-fold dilution steps higher than those for C. albicans and, similarly, those for C. guilliermondii are approximately eight two-fold dilutions higher. In addition, only a small number of cases involved these species in the clinical trials. This means there is insufficient evidence to indicate whether the wild-type population of these pathogens can be considered susceptible to micafungin.

Kommentaar 5: Voriconazole & C. albicans, C. tropicalis, C. parapsilosis

Strains with MIC values above the S/I breakpoint are rare or not yet reported. The identification and antifungal susceptibility tests on any such isolate must be repeated and if the result is confirmed the isolate sent to a reference laboratory. Until there is evidence regarding clinical response for confirmed isolates with MIC above the current resistant breakpoint they should be reported resistant.

EUCAST AFST eesmärgid 2015…

1. Isavuconazole ECOFF setting for *Candida* and *Aspergillus*

2. QC MIC ranges for remaining compounds (eg. micafungin)

3. New agar screening method for azole resistance in *A. fumigatus*

4. *Aspergillus* echinocandin testing

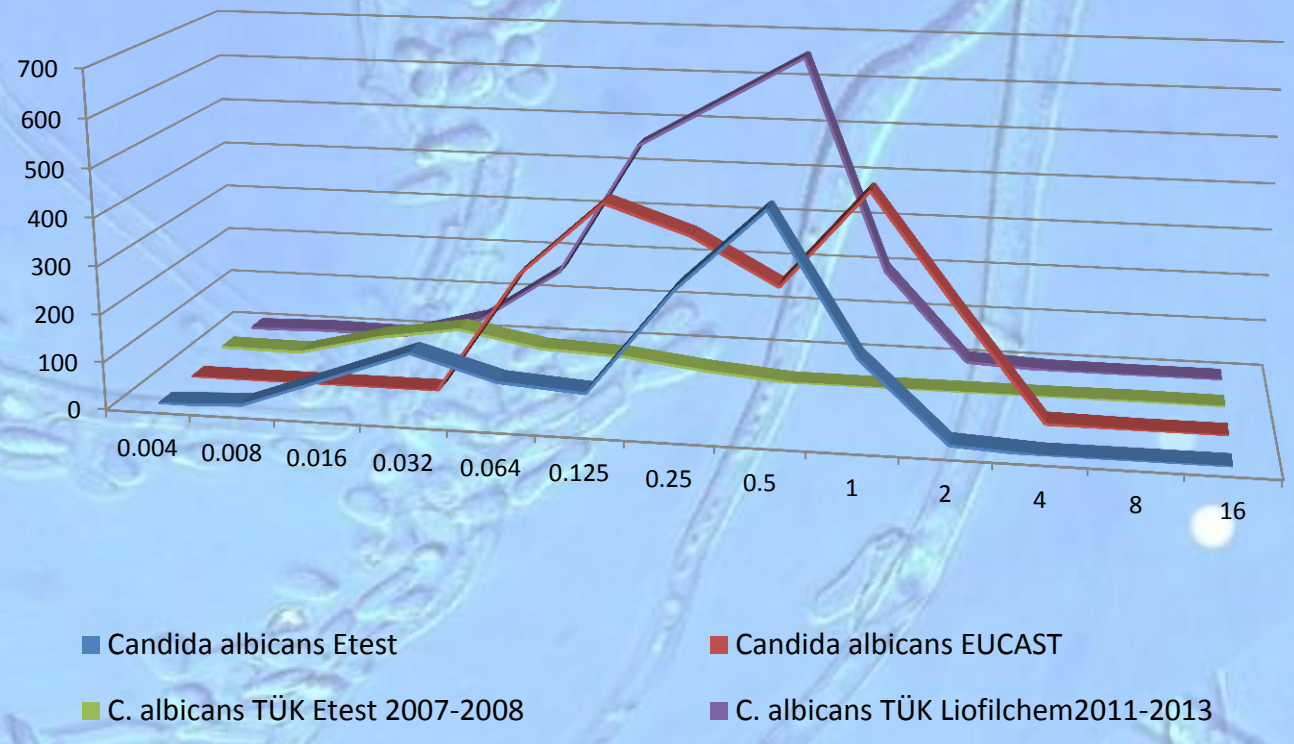
5. Systematic revision of documents >3 years old

6. Breakpoints for topical agents

The next meeting of the AFST General Committee will be at the 25th ECCMID, 25 – 28 May, Copenhagen, Denmark 2015.

Kommertsiaalsed meetodid ja võimalikud probleemid Amfoteritsiin B ja *Candida albicans*

- EUCAST MIK andmekogu Etest 1320 tüve
- EUCAST MIK andmekogu mikrolahjendusmeetod 1983 tüve
- TÜK Ühendlaboris määratud MIK 2007-2008 Etest (AB Biodisk) 260 tüve
- TÜK Ühendlaboris määratud MIK 2011-2013 MIC test strips (Lyofilchem) 2116 tüve



NB! Amfoteritsiini BP tundlik MIK≤1.0; resistentne MIK>1.0

Poster ECCMID Berlin 2013

Agreement of MIC test strips®, Etest® and the EUCAST broth microdilution method for Candida spp. antifungal susceptibility testing

A. Elefanti*, J. Meletiadis, M. Siopi, L. Zerva, A. Velegraki (Athens, GR)

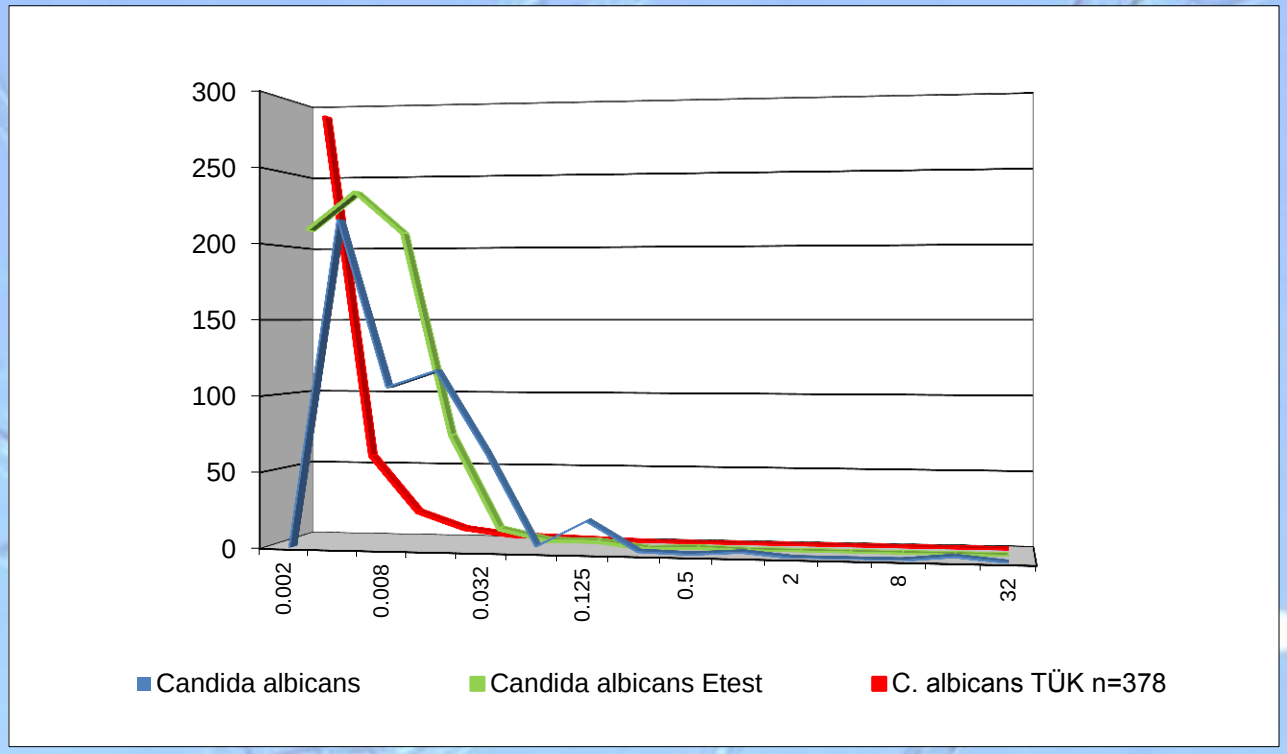
Objectives: The purpose of present study was to compare two commercial methods, MIC test strips® and Etest®,with the EUCAST reference broth microdilution (BMD) method.

Results: The overall percentage agreement between MIC test strip® and EUCAST ranged **from 65% (amphotericin B)** to 98% (anidulafungin). For azoles percentage agreement ranged from 79% (posaconazole) to 94% (fluconazole) and for the echinocandins from 88% (caspofungin) to 98% (anidulafungin). Agreement between MIC test strip ® and Etest® ranged from 83% (posaconazole) to 100% (fluconazole and amphotericin B). Finally, the amphotericin B MIC values obtained from the MIC test strip® and Etest® for were higher for 69% and 80% of the isolates, respectively than those obtained by the EUCAST BMD method.

Conclusions: By testing this population of susceptible isolates, the two commercial MIC tests provided equivalent results. The high amphotericin B MIC (>= 2 mg/L) recorded, and the low agreement, with the MIC test strips® and Etest®, suggest that the MIC values obtained by the commercial tests necessitate verification using the EUCAST BMD reference method.

Kommertsiaalsed meetodid ja võimalikud probleemid Anidulafungiin ja *Candida albicans*

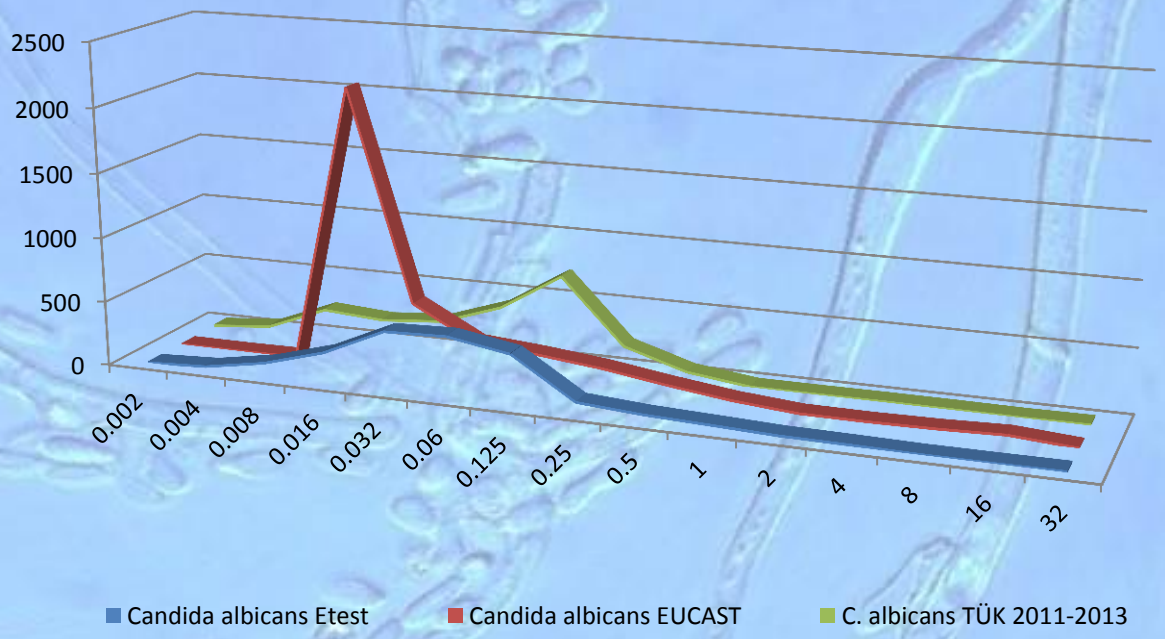
- EUCAST MIK andmekogu Etest 748 tüve
- EUCAST MIK andmekogu mikrolahjendusmeetod 537 tüve
- TÜK Ühendlaboris määratud MIK 2011-2013 MIC test strips (Lyofilchem) 378 tüve



NB! EUCAST Aug 2014 anidulafungiini uus BP tundlik MIK≤0.03; resistentne MIK>0.03
Arvestame, et määrame anidulafungiini v mikafungiini MIK (mitte kaspofungiini)

Kommertsiaalsed meetodid ja võimalikud probleemid Itrakonasool ja *Candida albicans*

- EUCAST MIK andmekogu Etest 1893 tüve
- EUCAST MIK andmekogu mikrolahjendusmeetod 3658 tüve
- TÜK Ühendlaboris määratud MIK 2011-2012 MIC test strips (Lyofilchem) 2178 tüve



NB! EUCAST Aug 2014 uus itrakonasooli BP tundlik MIK≤0,06; resistentne >0,06

Koju kaasa

- Analüüsige oma kliinikus/laboris seente ravimtundlikkuse andmeid (erinevad liigid, ravimid ja meetodid)
- Leidke selleks (töö)aega ja ressursse
- Kvaliteedikontroll – ühe meetodi piires ja meetodi üleselt

Tänan !