

P2142 Risk factors for isolation of fluconazole or echinocandin non-susceptible *Candida* spp. among patients hospitalised in an intensive care unit

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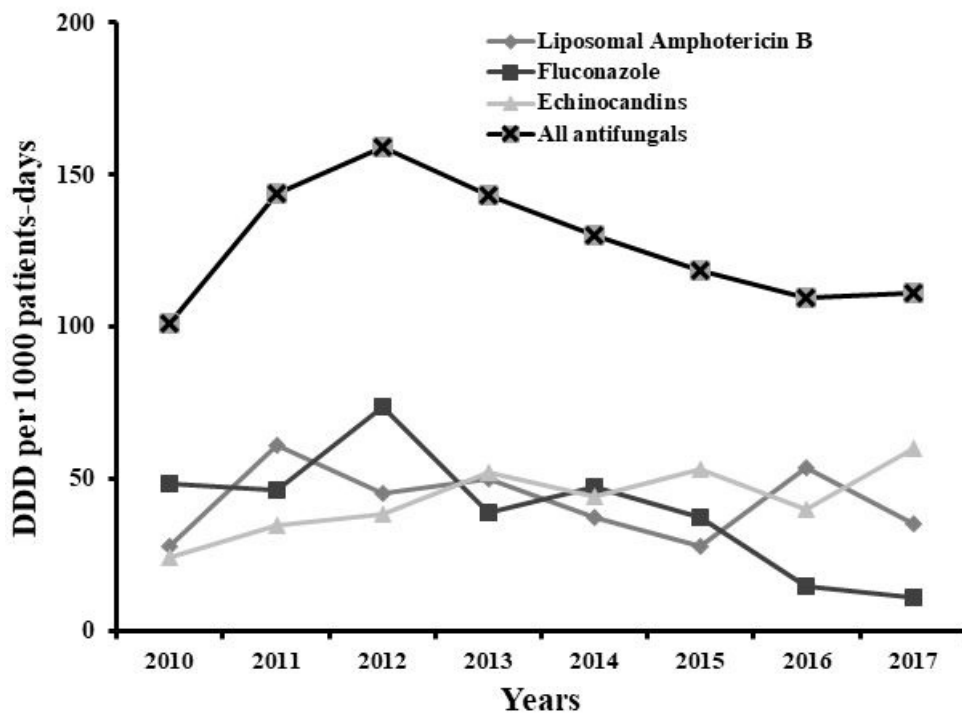
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Background: Utilization of antifungals may lead to selection of *Candida* spp. with reduced susceptibility to such antifungals. The aim of the present study is to identify risk factors for isolation of fluconazole- or echinocandin non-susceptible *Candida* spp. among critically ill patients.

Materials/methods: A retrospective observational study was conducted during an 8-year period (2010-17) at the Intensive Care Unit of University General Hospital of Patras, Greece. Samples (blood, catheter-tip, urine, bronchial secretions, trauma, and peritoneal fluid) from patients were tested for the presence of *Candida* spp. All yeasts were identified using Vitek 2 Advanced Expert System. Susceptibility of antifungals was assessed by Etest and was evaluated according to CLSI. Antifungal consumption was calculated using the defined daily dose (DDD) per 100-patient-days.

Results: Among 2684 patients hospitalized at the ICU during the study period, 181 (6.7%) had at least one positive sample positive for *Candida* spp. Non-*albicans* species predominated (107 patients; 59.1%). *C. albicans* was the most commonly isolated species (74; 40.9%) followed by *C. parapsilosis* (65; 35.9%), *C. glabrata* (17; 9.4%), *C. tropicalis* (23; 12.7%) and *C. krusei* (two; 0.1%). Sixty isolates (33.3%) were non-susceptible to fluconazole (37 resistant; 20.4%) and 34 (18.1%) non-susceptible to at least one echinocandin (19 resistant; 10.5%). Multivariate analysis found that isolation of non-*albicans* species ($P < 0.001$; OR 9.3, CI 3.4-25.5), isolation of non-susceptible strain to at least one echinocandin ($P < 0.001$; OR 14.2, CI 4.6-44.3) and hospitalization during 2014-17 ($P < 0.001$; OR 1.4, CI 1.2-1.7) were associated with isolation of fluconazole non-susceptible species. Isolation of *Candida* spp. non-susceptible to at least one echinocandin was independently associated with isolation of strain non-susceptible to fluconazole ($P < 0.001$; OR 8.9, CI 3.4-22.9) and prior administration of the echinocandin to which the strain was non-susceptible ($P 0.019$; OR 7.3, CI 1.4-38.9). Figure depicts the annual antifungal consumption.

Conclusions: A high percentage of isolates were non-susceptible to fluconazole and to echinocandins. Echinocandin administration led to isolation of non-susceptible isolates, while fluconazole administration didn't show such isolation.



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