

P0339 Phenotypic and genotypic virulence features of *Candida albicans* strains isolated from one big hospital in Bucharest, Romania

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Background: *Candida albicans* is a major fungal pathogen causing lethal infections in immunocompromised patients. *C. albicans* forms antifungal tolerant biofilms contributing significantly to therapeutic failure. The aim was to isolate and assess by phenotypic and genotypic methods the adherence and biofilm formation features of 16 *C. albicans* clinical strains isolated from patients with cardiovascular diseases.

Materials/methods: The strains were identified by Vitek and confirmed by Api Candida. Attachment to the inert substrata and biofilm production were assessed by using a microtiter method. The genetic support of the adherence genes was investigated by PCR.

Results: The analyzed strains were predominantly isolated from the 20 - 85 years patients. The most frequently positive specimens were represented by the upper respiratory tract secretions (URTS), followed by wound secretions. The highest biofilm producers were isolated from URTS and wound secretions. The most frequently encountered adherence genes were ALS1, ALS3, ALS4, ALS6, SAP7 and SAP8, suggesting that these genes significantly contribute to the overall virulence of *C. albicans* strains isolated from symptomatic infections, presumably by facilitating the adherence to cellular and inert substrata. The ALS5, ALS7, ALS9, SAP1, SAP3, SAP4, SAP5, SAP6, SAP9 and SAP10 genes were absent in all studied strains.

Conclusions: The *C. albicans* strains isolated from different clinical specimens exhibited biofilm formation properties, also revealing specific adherence gene profiles. The most frequently encountered adherence genes were ALS1, ALS3, ALS4, ALS6, SAP7 and SAP8, suggesting that these genes significantly contribute to the overall virulence of *C. albicans* strains isolated from symptomatic infections, presumably by facilitating the adherence to cellular and inert substrata.