

P1205 **Biofilm production among *Candida* spp. isolated from blood culture in hematological and non-hematological patients**

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Background: The objective of this study was to evaluate the biofilm production (BP) among the common *Candida* spp. isolated from blood culture in hematological (Hem) and non-hematological (non-Hem) patients (pts).

Materials/methods: BP was performed using a known 96-well microtiter plate-based method [M. Tumbarello et al, 2012]. BP was quantified biochemically using the 2,3-bis(2-methoxy-4-nitro-5-sulfophenyl)-5-[(phenylamino)carbonyl]-2H-tetrazolium hydroxide (XTT; Sigma) reduction assay. Isolates for which the optical density (OD) was of ≥ 0.1 were scored as biofilm-forming.

Results: A total of 109 *Candida* blood isolates (*C. albicans* $n = 22$, *C. parapsilosis* $n = 22$, *C. tropicalis* $n = 22$, *C. krusei* $n = 21$, *C. glabrata* $n = 22$) were investigated (55 from Hem pts, 54 from non-Hem pts). Among 59 (54%) biofilm-forming *Candida* spp. 33 (60%) were from Hem and 26 (48%) from non-Hem pts (Table). BP by *C. albicans* was significantly less frequent (32%) than non-*C. albicans* species (60%; $p=0.02$). BP prevailed in *C. tropicalis* (82%), *C. krusei* (81%) and *C. parapsilosis* (50%). There were no differences in BP among *Candida* spp. isolated from Hem and non-Hem pts. Among the *Candida* spp. isolated from Hem pts, BP prevailed in *C. krusei* (91%), *C. tropicalis* (82%) and *C. parapsilosis* (73%) compared to *C. albicans* (18%, $p<0.05$). Among the *Candida* spp. isolated from non-Hem pts, BP predominated in *C. tropicalis* (82%) and *C. krusei* (70%) compared to *C. glabrata* (18%, $p<0.05$), Table.

Conclusions: BP varies among the common *Candida* spp. being higher in *C. tropicalis* (82%). There were no differences in BP among *Candida* spp. isolated from Hem and non-Hem pts., but the predominant biofilm-forming *Candida* spp. were different among analyzing groups.

Table. Biofilm production among *Candida* spp. isolated from Hem and non-Hem pts

<i>Candida</i> spp.	<i>n</i>	Biofilm-forming isolates (OD \geq 0.1)		
		Total, <i>n</i> (%)	Hem, <i>n</i> (%)	Non-Hem, <i>n</i> (%)
<i>C. albicans</i>	22	7(32)	2(18)	5(46)
<i>C. parapsilosis</i>	22	11(50)*	8(73)*	3(27)
<i>C. tropicalis</i>	22	18(82)*	9(82)*	9(82)*
<i>C. krusei</i>	21	17(81)*	10(91)*	7(70)*

<i>C. glabrata</i>	22	6(27)	4(36)	2(18)
Total	109	59(54)	33(60)	26(48)

$p < 0.05$