

We aimed to determine the impact of biofilm production measured by metabolic activity (MA) and biomass (BM) on the prognosis of adults with candidemia” Muñoz et al (2018).

Abstract:

Objectives: The role of biofilm production in the outcome of candidemia remains under discussion. Current evidence relies on variable biofilm detection methods while evaluating distinct clinical endpoints. We aimed to determine the impact of biofilm production measured by metabolic activity (MA) and biomass (BM) on the prognosis of adults with candidemia.

Methods: Retrospective cohort including 280 adults with candidemia admitted from 2010 to 2016. BM was assessed using crystal violet binding stain and the XTT reduction assay was used to detect MA. Strains were classified as high and moderate-low biofilm producers according to published cut-offs. The primary outcome was overall mortality within seven and 30 days. The secondary outcome was unfavorable prognosis defined as metastatic infection, admission to an intensive care unit due to the severity of candidemia, or death within 30 days.

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Results: High BM and high MA were detected in 90 (32.1%) and 114 (40.7%) of the 280 isolates, respectively. Comparison of high and moderate-low biofilm forming isolates revealed no correlation between biofilm production and 7-day mortality (BM high 15/90 [16.7%] vs. moderate-low 24/190 [12.6%]; MA high 12/114 [10.5%] vs. moderate-low 27/166 [16.3%]), 30-day mortality (BM high 34/90 [37.8%] vs. moderate-low 61/190 [32.1%]; MA high 33/114 [28.9%] vs. moderate-low 62/166 [37.3%]), or unfavorable prognosis (BP high 45/90 [50.0%] vs. moderate-low 73/190 [38.4%]; MA high 41/114 [36.0%] vs. moderate-low 77/166 [46.4%]).

Conclusions: Biofilm production was not a predictor of mortality or of unfavorable prognosis

in adults with candidemia.

Reference:

Muñoz, P., Agnelli, C., Guinea, J., Vena, A., Alvarez-Uria, A., Marcos-Zambrano, L.J.,
Escribano, P., Valerio, M. and Bouza, E. (2018) Is Biofilm Production a Prognostic Marker in
Adults with Candidemia? *Clinical Microbiology and Infection*. February 2nd. .

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