

EFFECT OF DRUGS ON VIRULENCE FACTORS OF *Candida albicans* ISOLATED FROM ORAL LESION

Scatena MG*, Castillo GV*, Lehner EMP *, Belardinelli P, Barembaum SR*, Azcurra AI *

*Dpto. Biología Bucal y de Patología Bucal, Facultad de Odontología, Universidad Nacional de Córdoba.

Haya de la Torre S/N, Ciudad Universitaria, CP: 5000. Córdoba (Argentina)

Candida albicans is an opportunistic fungus widely found in oral cavity, causing stomatological lesions. Chlorhexidine (CLX) and nystatin (NYS) are frequently employed in clinical dentistry. There are evidences of the inhibitory role of aspirin (AAS) on virulence factors for fungal adhesion and infection as lipases (LIP) and biofilm formation (BF).

The objective of this study was to evaluate the effect of AAS, CLX and NYS on BF and LIP activity of *C. albicans* isolated from oral lesions.

The strains were isolated from patients with different lesions (chronic candidiasis CC n=6, lichen planus LP n=5, and oral cancer OC n=5) and were identified in chromogenic medium and biochemical tests. A reference strain was employed. BF by XTT method, LIP activity, by rhodamine assay, and inhibition of LIP activity with AAS were assessed. Sub-inhibitory concentrations of CLX, NYS and AAS were used. Data were analyzed by Wilcoxon test ($p \leq 0.05$).

All isolates showed LIP activity and BF (LIP=1.16±0.07; BP=305.4± 188.7). LIP did not showed significant differences between oral lesions. BF values were higher in OC and CC ($p=0.05$ y $p=0.04$, respectively). LIP activity showed lower values with AAS and CLX treatments ($p < 0.0001$). In OC isolates, the highest values of LIP inhibition were observed (1.88 mM, $p < 0.0001$). BF diminished significantly with CLX ($p=0.03$). When the oral lesion was considered, AAS treatment showed a diminution of BF in CC ($p=0.004$) and CLX, in OC ($p=0.015$).

The most important inhibition of virulence factors studied was observed with AAS and CLX. Although that CC and OC strains showed the highest values of LIP and BF, these were the most sensible to the treatment with these drugs.

Considering the role of virulence factors in fungal pathogenicity, the present study may mean a contribution in the search of a better therapeutic option.

Key words: *Candida albicans*, aspirin, chlorhexidine, nystatin