

TITLE: IN VITRO EVALUATION OF SERTRALINE ASSOCIATED TO ISOCONAZOLE IN THE GROWTH OF *Candida albicans*.

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ABSTRACT:

Microorganisms of the genus *Candida* belong to the Fungi kingdom. They are part of the resident microbiota of skin and mucosa and some strains may manifest aggressively, causing superficial or systemic lesions. Systemic infections are common in hospital settings, especially in immunosuppressed conditions. In routine concentrations, some strains are resistant to the molecules used and it is known that larger dosages may cause adverse effects. The antifungal activity of selective serotonin receptor inhibitory (SSRI) was identified after treatment of a severe premenstrual syndrome with sertraline exhibits absence of candidiasis. It is believed that antifungals can be associated with new molecules and decrease the selection of resistant strains. To evaluate the in vitro activity of SSRIs isolated or combined with the antifungal Isoconazole against *Candida albicans*. The tests were carried out with strains of *Candida albicans* ATCC 10231. The interaction between SSRIs and antifungal was estimated by micro dilution in broth according to standard M27-A2 of CLSI (2002). The tests were run in RPMI broth contained in sterile U-shaped 96-well Microtier Sensitive plates. To evaluate the in vitro interaction between drugs, the Checkerboard test was performed. In this method, drugs are arranged on the board like on a checkerboard. Each column contained a decreasing concentration of antifungal and each line had a decreasing concentration of SSRI. The minimum inhibitory concentration (MIC) obtained for isoconazole was 0.39 µg / mL and for sertraline was 195.31 µg / mL, giving a Σ CIF = 0.5078, indicating the synergistic effect of this combination. A synergistic action of Isoconazole / Sertraline was observed. This study serves as a basis for research aimed at studying the susceptibility of resistant strains to the concentrations of antifungal usually used.

Keywords: candidiasis, Sertraline, Isoconazole.