

***Eugenia uniflora* ethyl acetate fraction impairs *Candida albicans* infection in a murine model of oral candidiasis**

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Candida albicans is the most isolated species in oral candidiasis, and its clinical manifestation is characterized by the presence of a white pseudomembranous plaque on the oral cavity surface. It is mandatory to search for new therapeutic sources for oral candidiasis. The aim of this study was to investigate the action of the *Eugenia uniflora* ethyl acetate fraction on oral candidiasis using a murine model of infection with *C. albicans* 111R, a highly filamentous strain. The influence of *E. uniflora* ethyl acetate fraction (1000 µg/mL) on oral candidiasis was analyzed in three different conditions: Group I: Animals that were infected with *C. albicans* strain 111R grown in NGY broth in the absence of *Eugenia uniflora* ethyl acetate fraction. Group II: Animals that were infected with *Candida albicans* strain 111R grown in NGY broth in the presence of *Eugenia uniflora* ethyl acetate fraction and Group III: Animals that were infected with *Candida albicans* strain 111R grown in NGY broth in the absence of *Eugenia uniflora* ethyl acetate fraction, where the fraction was administered to the animal's tongue after infection. The samples from the oral cavity were for direct examination and culture on Sabouraud Dextrose Agar with Bengal Rose for Colony Forming Units (CFU) counting. The tongue was excised for histopathological analysis. Extensive white pseudomembranous plaque was observed in animals from Group I, where filamentous cells were observed at the direct examination, whereas clinical lesions were significantly reduced in Group II and Group III animals. The reduction of clinical signs of oral candidiasis in animals either inoculated with yeasts pretreated with the fraction or where the natural product was administered to the animal's tongue was confirmed by CFU counting, that ranged from 2.36 Log₁₀ CFU/ml to 1.85 Log₁₀ (Groups I and II, respectively) and from 2.36 Log₁₀ CFU/ml to 1.92 Log₁₀ (Groups I and III, respectively). Histopathological analysis showed that the tissue damage and erosion on the surface of tongue mucosa as well as the presence of inflammatory cells on the lesion area were significantly reduced in Groups II and III animals. The *E. uniflora* ethyl acetate fraction impairs *C. albicans* pathogenesis (specifically in bud-to hyphae transition), reducing tissue invasion and minimizing the clinical aspects of lesions in a murine model of oral candidiasis, suggesting that it may be a future alternative for the treatment of *Candida* infections.

Key-words: *Candida albicans*, Oral candidiasis, *Eugenia uniflora*, murine model