ANTIFUNGAL EFFECT OF AVOCADO (Persea americana M.) SEED INFUSION TOWARDS Candida glabrata GROWTH IN VITRO

ABSTRACT

Background. Oral candidiasis is the most common opportunistic infection in human oral mucosa, most cases of oral candidiasis have been attributed to Candida albicans, but recently non-albicans Candida species have been identified as frequent human pathogens, especially Candida glabrata. In this past two decades, as consequences of the widespread use of antifungal prophylaxis, immunosuppressive drugs and the emergence of the AIDS patients, C. glabrata is increasingly implicated in human infection. C. glabrata needs more concern because of its inherent resistance to certain antifungal agents, it can cause candidemia and also associated with systemic infection that related with high mortality rate. Avocado is a tropical plant that thrives throughout Indonesia. Widespread use of avocado fruit leads to high waste of avocado seed, which has many phytochemical substances. Purpose. This study aimed to find the effective concentration of avocado seed infusion that is able to inhibit the growth of C. glabrata in vitro. Methods. This research was conducted using C. glabrata culture. The inoculums were incubated in Sabouraud Broth to cultivate C. glabrata. Avocado seed infusion was diluted in various concentrations: 100%, 50%, 25%, 12.5%, 6.25%, 3.125%, 1.56%, 0.78%. Inoculums were mixed in Avocado seed infusion and cultured on Sabouraud Dextrose Agar. After incubated 1x24 hours, colonies of C. glabrata were counted. Results. The colony count on the concentration 100%, 50%, 25% showed growth of C. glabrata colonies, but less than positive control. Conclusion. Avocado seed infusion is able to inhibit the growth of C. glabrata colonies, but unable to eliminate C. glabrata colonies thoroughly.

Keywords: Oral Candidiasis, Persea americana M., Candida glabrata, Avocado seed, Infusion