ABSTRACT

Background. C. albicans is the most common type that found in the oral cavity and causes oral candidasis. Acanthus ilicifolius has potential as antifungal, but has no studied about cytotoxicity test. Purpose. To examine antifungal potency of Acanthus ilicifolius leaf extract against Candida albicans and its cytotoxicity on fibroblasts BHK (Baby Hamster Kidney) 21. Methods. This study was a true experimental laboratory with posttest only group design. Acanthus ilicifolius extraction with solvent chloroform. The treatment group consisted of five groups were given different concentrations of extracts of Acanthus ilicifolius each group was 100% (P1), 50%(P2), 25%(P3), 12.5%(P4) and 6.25%(P5). Antifungal test, negative control group (K-) media SDA (Sabouraud Dextrose Agar), while positive control group (K+) media SDA (Sabouraud Dextrose Agar) with Candida albicans ATCC10231, incubated 48 hours after treatment and calculated the colony by colony counter (CFU / mL). Cytotoxicity test, treatment group consisted of five groups were given different concentrations of extracts of Acanthus ilicifolius each group was 100% (P1), 50%(P2), 25%(P3), 12.5%(P4) and 6.25%(P5). Eagles media negative control group (K-) and positive control group (K+) media with BHK-21 cells. Test using the MTT assay and its absorbance values were measured using ELISA reader and then calculated by the formula % cell death. Results. Antifungal Test: group K (+) compared with P1, P2, P3, P4 and P5 (p<0.05); Group K (-) compared to the P4 and P5 (p<0.05); Group P4 compared with P5 (p<0.05); while group K (-) compared with P1, P2, and P3 (p> 0.05). Cytotoxicity assay; Group P1 compared with group P2, P3, P4 and P5 (p<0.05), while the P4 to P5 treatment (p> 0.05). Conclusion. Acanthus extract ilicifolius has antifungal potency against candida albicans. Minimum inhibitory concentration(MIC) at concentration 6.25% and Minimum fungicidal concentration (MBC) at concentration 25%. Extracts mangrove Acanthus ilicifolius was not toxic to fibroblasts BHK (Baby Hamster Kidney) 21.

Keywords: Acanthus ilicifolius, antifungal test, cytotoxicity test, cell fibroblasts BHK (Baby Hamster Kidney) 21.