

IL-17 Expression in Oral-Candidiasis-Immunosuppressed-Models treated with Acanthus Illicifolius Extracts

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ABSTRACT

Objective(s). *Immunosuppressed conditions are susceptible for fungal invasion. Candida albicans (C.albicans) are the most prevalent species that caused oral candidiasis. IL-17 pathway play role in antifungal immunity. Acanthus ilicifolius (A.ilicifolius)'s leaves chloroform extracts has antifungal agent against C.albicans growth. Nystatin is regularly used for oral candidiasis. The aim of this study was to compare treatment effect of A.ilicifolius's leaves extracts with nystatin on IL-17 expression in oral candidiasis immunosupressed model.*

Method(s). *This study was true experimental with post test only control group design. Sixteen male Ratus Novergicus Wistar strain, aged 12 weeks, average 250g weight and healthy were immunosuppressed with dexamethasone (0,5mg/day) and tetracycline (1mg/day) orally for 7 day, after that induced by C.albicans (ATCC-10231) 6×10^8 on the tongue of rats for 2 weeks (3 times/week). Rats divided into four groups (n=4/group): no-treatment(G1), nystatin-treatment(G2), A.Ilicifollius(8%)-Treatment-2(G3), and A.Ilicifollius(16%)- Treatment(G4). The rats was treated for 14 days. After treated the tongue were biopsied and IL-17 expression were examined by immunohistochemistry. The result observed using microscope(400x magnification) and statistically analyzed (One-way ANOVA, LSD-test, $p < 0,05$).*

Result(s). *IL-17 expression of G2($11,5 \pm 1,29$), G3($13,7 \pm 2,06$) and G4($13,5 \pm 2,08$) are higher than G1($3,5 \pm 1,29$). There was no significant differences between G2 to G3 and G4($p > 0,05$).*

Conclusion(s). *A.ilicifolius extract can increase expression of IL-17 in oral-Candidiasis-immunosupressed-model. A.ilicifolius extract has the same effect compare with nystatin.*

Key words : *immunosupressed, oral candidiasis, candida albicans, achanthus ilicifolius, IL-17*

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