EXPLORATION IN THE USE OF MEDICINAL PLANT ACANTHUS ILICIFOLIUS L IN THE TREATMENT OF ENDOTHELIAL DYSFUNCTION

Abstrak:

Endothelial dysfunction is an important factor of growth and development in atherosclerotic process. Atherosclerosis is a vascular disease. Indicators applied to determine endothelial dysfunction are, for example, VCAM and TNF-α. In this article the regulation of vascular defect or inflammation/abscess case in rural area used Acanthus ilicifolius L fruit. However, the extract effect of Acanthus ilicifolius L fruit to suppress of VCAM and TNF-α expression remains unclear. The authors performed animal trial to Rattus norvegicus that were divided in three groups. Group one, comprised 5 animals, served as control, group two of five animals were induced with LPS H. pylori 2.5 μg/kg BW intramuscularly, and group three of five animals were induced with LPS H. pylori in the same way and given with the extract of Acanthus ilicifolius L fruit (with a dose of 70 mg/kg BW in 0.5% CMC per-oral/day) for ten days. This experimental research used posttest only control group design. The analysis unit was heart organ. Heart section was made with thickness between 4-6 μ. Staining was performed with indirect immunohistochemistry. The results obtained using data analysis (t-test) were as follows: (1) There was significant difference between VCAM and TNF-α group of control with group induced by LPS H. pylori (p < 0.05). (2) There was no significant difference between VCAM and TNF-α in control group with group induced by LPS H. pylori receiving the extract of Acanthus ilicifolius L fruit (p > 0.05). (3) There was significant difference between group of induced with LPS H. pylori with group induced with LPS H. pylori and extracts of Acanthus ilicifolius L fruit (p < 0.05). Thereby, it can be concluded that the extract of Acanthus ilicifolius L fruit can suppress the expression of VCAM and TNF-α. This research should be developed furthermore especially for active agent insulator, and should also be done by clinical test to larger animals before being applied to human.

Keyword:

Atherosclerosis, Inflammation, Mangrove plant (Acanthus ilicifolius L)

Daftar Pustaka:

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