

ABSTRACT

EFFECT OF WATER EXTRACT GOLD SEA CUCUMBER (*Stichopus hermanii*) TO INCREASE ANGIOGENESIS IN HEALING PROCESS OF TRAUMATIC ULCERATION WISTAR RATS

Background: Traumatic ulcer is an ulceration of mucosa membrane commonly found in dental patients and caused by various trauma. Angiogenesis or new form blood vessels, had the important role during wound healing process. Gold sea cucumber (*Stichopus hermanii*) extract containing Glikosaminoglikan (GAG) which can increase angiogenesis and make healing process in traumatic ulceration wistar rats faster. **Objective:** The aim of this study ti determint the effect of gold sea cucumber (*Stichopus hermanii*) extract to angiogenesis in traumatic ulcer in Wistar mice. **Method:** 24 *Rattus norvegicus* wistar male, weighing 200-300g and aged between 8-16 weeks, were divided into negative control group, the group of gold sea cucumber extract concentration 20%, 40%, 80%. With heated burnisher, the ulcer were induced in lower lip oral mucosa. Ulcer were form on day 2 and the group those in the golden sea cucumber extract received an application of the gel once on day 3 while control group not received any treatment. Then 6 animals for each group euthanized on day 4. The area were ulcer was form were removed, fixed, routinely processed for hematoxylin-eosing staining for counting the angiogenesis. As part of the histological evaluation, all slides were examined by a pathologist without knowledge of the previous treatment by means of an eyepiece grid under the microscope from 200x to 1000x magnification. All data were analyzed by ANOVA. The level for statistical significance was set at $P < 0.05$. **Result:** In angiogenesis, it showed significant difference between group control and group gold sea cucumber extract at concentration 40% and 80%. **Conclusion:** It can be conclude that gold sea cucumber extract effective to increase angiogenesis in eound healing process of Wistar rats.

Keywords: Gold sea cucumber, traumatic ulcer, wound healing, angiogenesis.