ABSTRACT

THE DIFFERENCES OF INCISION WOUND HEALING ON WHITE MALE RAT (*Rattus novergicus*) STRAIN *Sprague dawley* BETWEEN SUBCUTAN INJECTION OF MANGROVE LEAF EXTRACT (*Avicennia marina*) WITH VITAMIN C

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Background: An incision wound is a wound that can be caused by traumatic injuries such as knives and other sharp objects. Researchers tried to compare the differences between subcutaneous injection of 80% Avicennia marina mangrove leaf extract and vitamin C in wound healing.
Objective: The objective of this study was to determine the differences in the incision wound healing on white male rat (*rattus novergicus*) strain *sprague dawley* between subcutan injection of mangrove leaf extract (*Avicennia marina*) with vitamin C.
Method: This research was in the form of an experiment with Post Test Only Control Group Design. The study was conducted for 14 days. The sample used was 30 white rats and divided into 3 groups: control (K) was given aquades injection, treatment 1 (P1) was given subcutaneous injection of vitamin C as much as 0.09 ml, and treatment 2 (P2) was given subcutaneous injection of *Avicenia marina* mangrove leaf extract 80% as much as 0.09 ml. Then measured the length of the wound closure every day with a ruler.
Result: The mean wound healing time in the group (K) = 13.1 ± 2.0 days, (P1) = 10.2 ± 2.1 days, and (P2) = 12.2 ± 2.4 days. No allergic reactions were found during the trial period, and there was local infection in each trial group.
Conclusion: There was a difference in the wound repair of male white rats (Rattus novergicus) Sprague dawley strain given mangrove leaf extract (Avicennia marina) with vitamin C by subcutaneous injection.

Keyword: Incision wound, vitamin C, *Avicennia marina* mangrove leaf extract

ABSTRAK

PERBEDAAN PERBAIKAN LUKA SAYAT PADA KULIT TIKUS PUTIH JANTAN (*Rattus novergicus*) GALUR *Sprague dawley* ANTARA INJEKSI SUBKUTAN EKSTRAK DAUN *MANGROVE* (*Avicennia marina*) DENGAN VITAMIN C

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Latar Belakang: Luka sayat adalah luka yang dapat disebabkan oleh cidera traumatik berupa pisau dan benda tajam lainnya. Peneliti mencoba membandingkan perbedaan antara injeksi subkutan ekstrak daun *mangrove (Avicennia marina)* 80% dengan vitamin C.
Tujuan: Tujuan dari penelitian ini adalah untuk mengetahui perbedaan perbaikan luka sayat pada tikus putih jantan (*Rattus novergicus*) galur *Sprague dawley* yang diberikan ektrak daun *mangrove* (*Avicennia marina*) dengan vitamin C secara injeksi subkutan.
Metode: Penelitian ini berupa eksperimen dengan desain *Post Test Only Control Group Design.* Penelitian dilakukan selama 14 hari. Sampel yang digunakan adalah tikus putih berjumlah 30 ekor dan dibagi dalam 3 kelompok yaitu kontrol (K) diberikan injeksi akuades, perlakuan 1 (P1) diberikan injeksi subkutan vitamin C sebanyak 0,09 ml, dan perlakuan 2 (P2) diberikan injeksi subkutan esktrak daun *Mangrove Avicenia marina 80%* sebanyak 0,09 ml. Kemudian dilakukan pengukuran panjang penutupan luka setiap hari dengan mistar.
Hasil: rata-rata waktu penyembuhan luka pada kelompok (K)= 13,1 ± 2,0 hari, (P1)= 10,2 ± 2,1 hari, dan (P2)= 12,2 ± 2,4 hari. Tidak ditemukan adanya reaksi alergi selama masa percobaan, dan terdapat infeksi lokal pada masing-masing kelompok percobaan
Simpulan: terdapat perbedaan perbaikan luka sayat tikus putih jantan (*Rattus novergicus*) galur *Sprague dawley* yang diberikan ektrak daun *mangrove* (*Avicennia marina*) dengan vitamin C secara injeksi subkutan.

Kata kunci: Luka sayat, vitamin C, esktrak daun *Mangrove Avicenia marina*