

PENGARUH INFRARED, KASA LEMBAB DAN MEBO TERHADAP EPITELISASI DAN DIAMETER PENYEMBUHAN LUKA BAKAR DERAJAT II

EFFECT OF INFRARED, MOIST GAUZE AND MEBO ON EPITHELIALIZATION AND WOUND DIAMETER IN SECOND-DEGREE BURN HEALING

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ABSTRAK

Latar Belakang: Infrared merupakan sinar dengan panjang gelombang antara 750 nm – 1000 μ m. Infrared memiliki energi panas dan dapat mempercepat penyembuhan luka dengan mempengaruhi sirkulasi, pengeluaran faktor pertumbuhan, dan percepatan pertumbuhan sel. Penelitian ini bertujuan mengetahui pengaruh penyinaran infrared dengan kasa lembab dan MEBO terhadap epitelisasi dan diameter luka pada penyembuhan luka bakar derajat II.

Metode: Metode penelitian eksperimental dengan rancangan post test only control group design ini menggunakan tikus galur wistar (*Rattus norvegicus*) yang dibagi menjadi 4 kelompok random. Kelompok I dibiarkan terbuka, kelompok II ditutup kasa lembab, kelompok III ditutup kasa lembab dan diberi MEBO, kelompok IV ditutup kasa lembab, diberi MEBO, dan paparan sinar infrared yang dilakukan selama 14 hari. Data dianalisis dengan uji One Way Anova dan uji post hoc LSD.

Hasil: Hasil rerata epitelisasi yaitu K1 14.714,83 \pm 6.708,14 pixel, K2 26.336,83 \pm 5.101,97 pixel, K3 38.338,50 \pm 9.609,24 pixel, K4 54.115,67 \pm 15.336,01 pixel. Uji post hoc LSD menunjukkan ada perbedaan bermakna antara K1 dan K4 ($p < 0,05$). Hasil rerata diameter luka yaitu K1 14,76 \pm 1,74 mm, K2 12,00 \pm 1,19 mm, K3 9,28 \pm 1,60 mm, K4 6,57 \pm 3,12 mm. Uji post hoc LSD menunjukkan ada perbedaan bermakna antara K1 dan K4 ($p < 0,05$).

Kesimpulan: Hasil penelitian disimpulkan bahwa ada pengaruh infrared, kassa lembab dan MEBO terhadap epitelisasi dan diameter luka pada penyembuhan luka bakar derajat II.

Kata kunci : Infrared, epitelisasi, diameter luka, luka bakar derajat II

ABSTRACT

Background: Infrared is a ray with a wavelength range from 750 nm - 1000 μ m. Infrared radiation with its heating energy can accelerate wound healing by affecting circulation, expenditure of growth factors, and acceleration of cell growth. This study aimed to determine the effect of infrared radiation with moist gauze and MEBO on epithelialization and wound diameter in the healing of second-degree burn.

Methods: This experimental study with a post-test only control group design used 24 wistar strain rats (*Rattus norvegicus*) which were randomly divided into 4 groups of 6 each, and induced with second-degree burns. Group I was left untreated, group II was dressed with moist gauze, group III was dressed with moist gauze and MEBO, group IV was dressed by moist gauze, given MEBO, and exposed to infrared. This experiment was carried out for 14 days. The data were analyzed using One Way Anova test and LSD post hoc test.

Result: Mean epithelialization of group I, II, III, and IV were $14,714.83 \pm 6,708.14$ pixels, $26,336.83 \pm 5,101.97$ pixels, $38,338.50 \pm 9,609.24$ pixels, and $54,115.67 \pm 15,336.01$ pixels respectively. Post hoc LSD test showed a significant difference between group I and group IV ($p < 0.05$). Mean wound diameter of group I, II, III, and IV were 14.76 ± 1.74 mm, 12.00 ± 1.19 mm, 9.28 ± 1.60 mm, and 6.57 ± 3.12 mm respectively. Post hoc LSD test showed a significant difference between group I and group IV ($p < 0.05$).

Conclusion: Infrared, moist gauze and MEBO affects epithelialization and wound diameter in the healing of second-degree burns.

Keywords : Infrared, epithelialization, wound diameter, second-degree burns

