

ABSTRAK

Latar Belakang: *Sunburn* merupakan kerusakan kulit akibat dari radiasi sinar UVB dengan ditandai reaksi akut berupa eritema, dan rasa nyeri terbakar. Perubahan pada jaringan kulit dapat membuat inflamasi yang akan merusak dan berdampak kronis apabila tidak ada perawatan. Penyembuhan sunburn sangat dipengaruhi oleh peran makrofag dan proses epitelisasi. Diperlukan bahan untuk memperbaiki kerusakan jaringan kulit saat fase inflamasi supaya memasuki fase proinflamasi sehingga akibat sunburn dapat sembuh. Kefir mengandung antioksidan, antiinflamasi, probiotik, asam laktat, asam amino, protein, karbohidrat dan sebagai nutraceutical.

Metode: penelitian ini menggunakan post test only control group design. Sampel sebanyak 24 ekor BALB/c dibagi yaitu kelompok KN, kelompok P1 oral, kelompok P2 topical, dan kelompok P3 kombinasi. Paparan UV B selama 3 hari, dilanjutkan pemberian kefir dengan dosis 0,25 ml/KgBB/hari dengan pemberian kefir oral, topical serta kombinasi keduanya segera setelahnya selama 6 hari. Data diuji normalitas dan homogenisasi dilanjutkan uji One way Anova dan Post Hoc untuk jumlah makrofag. Epitelisasi diuji normalitas dan homogenitasnya kemudian dilanjutkan analisis Kruskal Wallis dan Mann Whitney.

Hasil: Uji Mann Whitney jumlah makrofag memiliki $p < 0,05$, artinya ada perbedaan sangat bermakna pada pasangan kelompok. Uji Post Hoc Tukey HSD memiliki nilai $p < 0,05$ yaitu kelompok topical dan kombinasi, kecuali kelompok oral $p > 0,05$, artinya ada perbedaan epitelisasi yang bermakna antara kelompok KN dengan kelompok P2 dan P3.

Kesimpulan: pemberian kefir berperan untuk mengatasi efek *sunburn* pada kulit.

Kata kunci: sunburn, kefir, makrofag, epitelisasi.

ABSTRAC

Sunburn is a result of UVB radiation with an acute reaction in the form of erythema, and burning pain. Changes in skin tissue can cause inflammation that will damage and have a chronic impact if there is no treatment. Sunburn healing is strongly influenced by the role of macrophages and epithelialization processes. Material is needed to repair skin

Meethod used is post test only control group design. The samples were 24 divided into 4 groups: negati control group, oral group, topical group and combination group with each sample of 6 female BALB / c mice. UV B exposure was carried out for 3 days, followed by kefir administration at a dose of 0.25 ml / KgBB / day with oral administration, topical and a combination of both. until day 6. Day 7 animals are terminated. The data were tested for normality and homogenization followed by One way Anova and Post Hoc tests for the number of macrophages. The epithelialization was tested for normality and homogeneity then continued with kruskal wallis and Mann Whitney analysis.

Results obtained were the lowest number of macrophages and epithelialization in the oral group and the highest in the combination group. There are differences in the number of macrophages and epithelialization. There was a significant relationship with $p < 0.05$ between the number of macrophages and the thickness of epithelialization. This means that there is a strong relationship between the number of macrophages, the more thick the epithelialization.

Conclusion: the administration of kefir acts to overcome the sunburn effect on the skin.

Keywords: sunburn, kefir, macrophages, epithelialization