

ABSTRAK

Judul : Perbandingan Efektivitas Ekstrak Kulit Jeruk Berastagi (*Citrus Sinensis L.*) Dengan Providone-Iodine 10% Terhadap Penyembuhan Luka Sayat Pada Tikus Berdasarkan Jumlah Kolagen dan Lama Penyembuhan Luka

Penyusun : Eka Lestari Br Perangin-Angin

NIM : 223307010063

Fakultas/Program Studi : Kedokteran/ Program Studi Sarjana Kedokteran

Dosen Pembimbing : Dr. dr. Oliviti Natali, M.Ked (DV), Sp.DVE, FINSDV

Penyembuhan luka merupakan proses biologis kompleks yang melibatkan pembentukan kolagen. Pemanfaatan bahan alami, seperti kulit jeruk Berastagi yang mengandung flavonoid, tanin, dan saponin, berpotensi mempercepat penyembuhan melalui efek anti-inflamasi, antioksidan, dan stimulasi kolagen. Penelitian ini bertujuan mengevaluasi efektivitas ekstrak etanol kulit jeruk Berastagi (EEKJ) terhadap pembentukan kolagen dan penyembuhan luka sayat pada tikus Wistar jantan, dibandingkan dengan *povidone-iodine* 10%. Desain penelitian menggunakan true experimental post test control group design dengan 5 kelompok, yaitu basis gel, *povidone-iodine* 10%, serta gel EEKJ konsentrasi 40%, 60%, dan 80%. Variabel yang diamati adalah jumlah kolagen dan persentase penyembuhan luka. Data dianalisis dengan One-Way ANOVA dan Post Hoc test ($\alpha=0,05$). Hasil menunjukkan tidak terdapat perbedaan bermakna antara kelompok basis gel, *povidone-iodine* 10%, dan EEKJ terhadap jumlah kolagen maupun persentase penyembuhan luka. Namun, kelompok EEKJ konsentrasi 40% menunjukkan rerata jumlah kolagen tertinggi dan konsentrasi 60% menunjukkan rata-rata persentase penyembuhan luka tertinggi (45,50) dibandingkan 40% (43,69) dan 80% (40,29). Kesimpulannya, ekstrak kulit jeruk Berastagi mampu merangsang pembentukan kolagen dan mempercepat penyembuhan luka sayat, meskipun efektivitasnya tidak berbeda signifikan dengan *povidone-iodine* 10%. Penelitian lanjutan diperlukan dengan jumlah sampel lebih besar, variasi konsentrasi, serta uji klinis pada manusia.

Kata kunci: Ekstrak kulit jeruk Berastagi, Penyembuhan luka, Kolagen, Konsentrasi, *Povidone-iodine*, Tikus putih

ABSTRACT

Title : Comparison of the Effectiveness of Berastagi Orange Peel Extract (*Citrus Sinensis L.*) with 10% Povidone-Iodine on Healing of Cut Wounds in Mice Based on the Amount of Collagen and the Duration of Wound Healing

Compiler : Eka Lestari Br Perangin-Angin

NIM : 223307010063

Faculty/Study Program : Medicine/Bachelor of Medicine Study Program

Supervisor : Dr. dr. Oliviti Natali, M.Ked (DV), Sp.DVE, FINS DV

Wound healing is a complex biological process involving collagen formation. The use of natural materials such as Berastagi orange peel (*Citrus sinensis L.*), which contains flavonoids, tannins, and saponins, has the potential to accelerate healing through anti-inflammatory, antioxidant, and collagen-stimulating effects. This study aimed to evaluate the effectiveness of ethanolic extract of Berastagi orange peel (EEKJ) on collagen formation and incision wound healing in male Wistar rats, compared with povidone-iodine 10%. The research design employed a true experimental post-test control group design with five groups: gel base, povidone-iodine 10%, and EEKJ gel at concentrations of 40%, 60%, and 80%. The observed variables were collagen amount and percentage of wound healing. Data were analyzed using One-Way ANOVA and Post Hoc test at a significance level of $\alpha = 0.05$. The results showed no significant differences among the gel base, povidone-iodine 10%, and EEKJ groups in terms of collagen amount or percentage of wound healing. However, the EEKJ 40% group exhibited the highest mean collagen score, while the EEKJ 60% group showed the highest mean percentage of wound healing (45.50%), compared with 40% (43.69%) and 80% (40.29%). In conclusion, the Berastagi orange peel extract was able to stimulate collagen formation and promote incision wound healing, although its effectiveness was not significantly different from that of povidone-iodine 10%. Further studies with larger sample sizes, wider concentration ranges, and clinical testing in humans are recommended.

Keywords: Berastagi orange peel extract, Wound healing, Collagen, Concentration, Povidone-iodine, Wistar rats