

ABSTRACT

Background: Burns is one the incidents that occasionally happen in community especially households and the most common burns to occur is in the second degree. Nowadays, Silicone Gel (cyclopentasiloxane) is used to heal the burns. Silicone Gel contains vitamin C ester which works to tarnish the burns and protect it from UV light. Another alternative is the use of Green Tea Topical. This plant contains Polyphenol which is useful to fight bacterial infections as well as UV light radiation and epigallocatechin-3-gallate (EGCG) which will accelerate the differentiation process on new cells. This study aims to compare the level of skin color brightness on the use of Green Tea Topical and Silicone Gel on the burns.

Method: Randomized Controlled Trial (RCT) consisted of nine research subjects was divided into two intervention groups. Four participants were included in Green Tea Topical group and five participants were included in Silicone Gel group. The intervention was conducted for two months in which the level of brightness and the softness of skin color were measured using Skin Analyzer instrument before and after the intervention. The data analyses used SPSS 16.0.

Result: The result of the statistical test showed that there was no significant difference ($p>0.05$) on the effectivity of brightness and softness on the application of Green Tea Topical and Silicone Gel even though the result of descriptive analyses test showed differences on each preparation group. The analysis result on the skin softness level which used Green Tea Topical showed that $p=0.016$ ($p<0.05$) which means that there was a significant difference in terms of the level of softness before and after the intervention.

Conclusion: The comparison of applying Green Tea Topical and Silicone Gel statistically did not show effective difference to brighten and soften the burns.

Keywords: Green Tea, EGCG, Camellia Sinensis, Silicone Gel, burns.

INTISARI

Latar Belakang: Luka bakar merupakan salah satu insiden yang sering terjadi di masyarakat khususnya rumah tangga dan ditemukan terbanyak adalah luka bakar derajat II. Saat ini, penyembuhan bekas luka bakar menggunakan *Silicone Gel* (*cyclopentasiloxane*). *Silicone gel* mengandung *vitamin C ester* yang berfungsi memudahkan bekas luka dan melindunginya dari sinar UV. Alternatif lain yaitu dengan *Green Tea Topical*. Tanaman ini mengandung *Polyphenol* yang berguna untuk melawan infeksi bakteri dan radiasi sinar UV dan *epigallocatechin-3-gallate* (EGCG) akan mempercepat proses diferensiasi pada sel-sel baru. Penelitian ini bertujuan untuk membandingkan tingkat kecerahan warna kulit pada pemakaian *Green Tea Topical* dan *Silicone Gel* pada bekas luka bakar.

Metode: *Randomized Controlled Trial* (RCT) dengan Sembilan subyek penelitian yang dibagi menjadi dua kelompok intervensi. Empat orang untuk kelompok *Green Tea Topical* dan lima orang untuk *Silicone Gel*. Intervensi dilakukan selama dua bulan dan diukur tingkat kecerahan dan kelembutan warna kulit menggunakan alat *Skin Analyzer* pada sebelum dan sesudah intervensi. Analisis data menggunakan SPSS 16,0.

Hasil: Hasil uji statistic menunjukkan tidak ada perbedaan yang bermakna ($p > 0,05$) pada efektifitas kecerahan dan kelembutan antara pemakaian *Green Tea Topical* dan *Silicone Gel* walaupun secara uji Analisa deskriptif menunjukkan perbedaan pada setiap kelompok sediaan. Hasil analitik tingkat kelembutan kulit menggunakan *Green Tea Topical* menunjukkan hasil $p = 0,016$ yang berarti terdapat perbedaan yang bermakna pada tingkat kelembutan sebelum dan sesudah intervensi.

Kesimpulan: Perbandingan antara pemberian *Green Tea Topical* dan *Silicone Gel* tidak memiliki perbedaan efektifitas secara statistic untuk mencerahkan dan melembutkan bekas luka bakar.

Kata Kunci: *Green Tea*, EGCG, *Camellia Sinensis*, *Silicone Gel*, Bekas Luka Bakar