

INTISARI

Gingivitis merupakan inflamasi pada gingiva yang disebabkan oleh bakteri plak gigi. Buah terong pipit (*Solanum torvum*) mengandung alkaloid, tanin dan triterpenoid yang berperan dalam menurunkan proliferasi sel basal *junctional epithelium* sebagai tanda proses penyembuhan *junctional epithelium*. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi gel ekstrak buah terong pipit (*Solanum torvum*) dan waktu pengamatan terhadap ketebalan *junctional epithelium* pada gingivitis tikus *Sprague dawley*.

Subjek penelitian yaitu 25 ekor tikus *Sprague dawley* yang dibagi menjadi lima kelompok. Tikus *Sprague dawley* diinduksi gingivitis dengan diikat *silk ligature* 4.0 mengelilingi bagian servikal gigi insisivus sentral rahang bawah selama 8 hari kemudian dilepas. Kelompok perlakuan diaplikasikan gel ekstrak buah terong pipit (*Solanum torvum*) 10%, 20%, 30%, kontrol positif diaplikasikan gel asam hyaluronat dan kontrol negatif diaplikasikan gel *CMC-Na* 2% pada gingiva labial tikus *Sprague dawley*. Tikus *Sprague dawley* didekapitasi pada hari ke-1, 3, 5, 7 dan 14 masing-masing 1 ekor. Sampel gingiva labial tikus *Sprague dawley* dibuat sediaan histologis dengan pewarnaan *Hematoxilin Eosin*. Pengukuran ketebalan *junctional epithelium* dilakukan menggunakan mikroskop cahaya (10x) dengan kamera *Optilab*® dan program *ImageRaster*®. Data hasil pengamatan dianalisis dengan *two factor ANOVA without replication* dan uji *Post Hoc DMRT*.

Hasil uji *two factor ANOVA without replication* menunjukkan terdapat perbedaan yang signifikan ($p < 0,05$) antar kelompok aplikasi bahan dan waktu pengamatan. Kesimpulan dari penelitian ini adalah aplikasi gel ekstrak buah terong pipit (*Solanum torvum*) dapat menurunkan ketebalan *junctional epithelium* dan waktu pengamatan berpengaruh pada ketebalan *junctional epithelium* pada gingivitis tikus *Sprague dawley*.

Kata kunci : ketebalan *junctional epithelium*, gingivitis, gel ekstrak buah terong pipit

ABSTRACT

*Gingivitis is gingival inflammation caused by dental plaque bacteria. Turkey berry (*Solanum torvum*) fruit contains alkaloids, tannins and triterpenoids that can suppress the proliferation of basal cells of the junctional epithelium as a marker of the healing process. This study aims to determine the concentrations effect of turkey berry (*Solanum torvum*) fruit gel extract and observation time on junctional epithelium thickness in Sprague dawley rat gingivitis.*

*The subject of this research was 25 Sprague dawley rats divided into five groups. Sprague dawley rats were induced by putting silk ligature 4.0 around the mandibular central incisor for 8 days then taken out. The treatment group is applicated with 10%, 20%, 30% of turkey berry (*Solanum torvum*) fruit gel extract, positive control is applicated with hyaluronic acid gel and negative control is applicated with 2% CMC-Na gel in the labial gingiva of Sprague dawley rats. Sprague dawley rats were decapitated on the 1st, 3rd, 5th, 7th and 14th day each one rat. Samples were processed into histological specimens and were stained with Hematoxylin Eosin. The junctional epithelium thickness was measured using a light microscope (10x) connected with Optilab® and ImageRaster®. The data was analyzed with two factor ANOVA without replication and Post Hoc DMRT.*

*Two factor ANOVA without replication test showed a significant difference ($p < 0,05$) between application material group and observation time. In conclusion, the application of turkey berry (*Solanum torvum*) fruit gel extract reduces junctional epithelium thickness and observation time gives effect to junctional epithelium thickness in Sprague dawley rat gingivitis.*

Keywords : junctional epithelium thickness, gingivitis, turkey berry fruit gel extract