THE EFFECT OF GIVING GEL COMBINATION OF BINAHONG LEAF EXTRACT AND TURMERICRHIZOME EXTRACT ON THE MATURE COLLAGEN DENSITY OF RATS WHICH HAVE II B DEGREE BURNS

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ABSTRACT

The aim of this research was to study the effect of giving a combination gel of Binahong leaf extract and Turmeric rhizome extract on mature collagen which has II B degree burns. Twenty five male rats, 3 months of age, 150-200 gram body weight were used. This research consists of five treatments. T0 were normal skin, T1 were used 1% silver sulfadiazine, T2, T3, and T4 are gel combination of Binahong leaf extract and Turmeric rhizome extract with increase concentration of Binahong leaf extract i.e. 1.25%, 2.5%, and 5%, while the concentration of Turmeric rhizome extract i. e 2% for each treatment. Treatments have been given topically for 14 days, twice a day, started after burn wound application. At the end of the treatment period, skin excision was carried out, then the histopathological examination was performed. Microscopic observation on the wound healing process on mature collagen density showed that T0 was not a significant difference with T3 and T4 ($p>0.05$), but T0 was significant difference with T1 and T2 ($p<0.05$). The better burn healing process on T3 is allegedly because of the activity of saponin, and tannin, contained in the Binahong, and curcumin in Turmeric rhizome which has the function to stimulate collagen and make collagen mature early. The combination of Binahong leaf extract 2.5% and Turmeric rhizome extract 2% have been proven to be effective for topical burn therapy.

***Keywords*:** Binahong leaf , Turmeric rhizome, collagen, skin burn, wound healing