ABSTRACT

Background: Experiments of Robusta coffee powder on rat-induced allocsan incision wound, clinically demonstrated similar healing rate with the Povidone Iodine 10%, but no studies that look directly the effect of coffee extract in ointment form when viewed in terms of histopathology. Purpose: The aim of this study was to identify the enhancement of healing process of full-thickness skin wound after robusta coffee beans extract ointment application. Methods: Sample consisted of 20 Cavia cobaya treated full-thickness wounds and was given robusta coffee beans extract ointment with a range of concentration of 22.5%, 45%, and 90% except the control group which was given by ointment base material. Animal is then executed on the fourth day and made its histopathological preparations. Data calculated and compared by one-way ANOVA test and LSD test. Result: The study showed that robusta coffee bean extract ointment can increase the number of lymphocytes, plasma cells, macrophages, fibroblasts, and blood vessels by the presence of Chlorogenic acid (CGA) and Caffeic acid. Conclusion: Robusta coffee bean extract ointment has the effect to enhance the healing process of full-thickness skin wound of Cavia Cobaya and the optimal concentration of robusta coffee bean extract ointment for the healing process is 45%.

Keywords: Robusta coffee bean extract ointment, the healing process, Chlorogenic acid and caffeic acid