ABSTRACT

EFFECT OF RED GINGER (*Zingiber officinale var. Rubrum*) EXTRACT ON COUNTS OF FIBROBLAST CELL AND COLLAGEN DENSITY IN CLEAN WOUND TISSUE OF MALE MICE (*Mus musculus*) (Experimental Research on Animal Test)

Aditya Putra Pamungkas, 011411131049. Medical Faculty of Airlangga University, Surabaya, Indonesia.

Introduction: In the wound healing process there are a variety of processes, including the most important are proliferation and remodelling process that has a very important role in the wound healing process. Red ginger contains active ingredients like chlorgenic acid which can increase TGF-β1 during the inflammatory process, so that it can stimulate fibroblast cells to synthesize collagen. The aim is determine the effect of red ginger extract against the number of fibroblasts cells and collagen density on clean wounds in male mice.

Methods: Sample using 32 male mice. The injury was made in a vertical incision with a length of 1cm and a depth of 1mm on the back of the mice.The samples were divided into 4 groups. group 1 was treated with red ginger extract in 7 days, group 2 was treated with basic treatment in 7 days, group 3 was treated with red ginger extract in 14 days, and group 4 was treated with basic treatment in 14 days. group 1 and 2 for the observation of fibroblast cell and goup 3 and 4 for collagen density observation.

Result: the result of t-2 test, sig. (2-tailed) for the fibroblast cell and collagen density is < 0,05 wich means that the extract of red ginger significantly affects the number of fibroblast cells and collagen density.

Conclusion: Red ginger extract can increase the number of fibroblast cell and collagen density on clean wounds of male mice.

Keywords: ***Zingiber officinale var. Rubrum, red ginger, wound healing, fibroblast, collagen, mice.***