ABSTRACT

In the previous study a comparison were made on the healing process of marmot skin wounds. Each subject was with one wound on its skin having the same size of area. The subjects were grouped into two. The wounds of one of the groups were treated using electric stimulation while the others were left naturally to heal. The result has shown that the ones treated using electric stimulation had a faster healing processes. In this research an experimentalion has been done to study the effect of electric stimulation on the skin wound healing process. Six marmots (Cavia cobaya) has been used as subyek of the experiment. Two cuts were made on each subyek on its rear back. The cuts identified as tre right and the left wound. The right wound were treated with elektric stimulation while the left wound were let to heal naturally. The left wound were used is referencs at the wound healing prosess for each subyect. The electric stimulation used was pulses of 20 Hz in frequency, 200 μsec width and of 30 volts amplitude. Each treatment was 30 minutes in duration and was given once a day. The wounds were assessed thru histopatologycal examination. The result of the research has shown a total average of 1.5 speedup in the process of healing for the wounds treated using electric stimulation as compared the ones that left untreated to heal. The total speedup is comprised of 1.27 average on the growth of epithelial layers, 1.27 average on the collagen density, 1.04 average on the blood vessels formation and 3 average on the collagen structure regularity. The result has shown that electric stimulation has speeded up the wound healing process. The optimum electric stimulation of the treatment is in a need to be studied.

Key words: wound healing process, electrical stimulation.