

A low-frequency of electrical stimulation improves wound healing

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Abstract	High frequency of electrical stimulation (ES) can cause patients to become uncomfortable. Therefore, it needs to use a low frequency of ES. However, the use of low frequency of ES (below 20 Hz) on wound healing is still unclear. Therefore, this study aimed to elucidate the effect of low frequency (10 Hz) of ES on wound healing. A wound with a diameter of one cm was created at the dorsal side of rats. The rats were divided into two groups; low frequency of electrical stimulation (LFES), and control group (without ES application). The application of ES was given for ten days. The wound size in the LFES group was smaller in LFES group compared to the control group. The intensity of polymorphonuclear neutrophils was lower in the LFES group, while the intensity of fibroblast was significantly higher in the LFES than in the control group. The formation of new epidermis (reepithelialisation) was faster in LFES group than in the control groups. Low frequency of ES (10 Hz) accelerated wound healing by reducing inflammation, improving the fibroblast intensity, and formation of new epidermis.
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