

적외선 레이저 다이오드가 콜라겐 형성에 미치는 영향

김태곤, 김영표, 이호식, 박용필, 천민우^a
동신대학교

The effect of infrared rays diode irradiation on collagen formation

Tae-Gon Kim, Toung-Pyo Kim, Ho-Sic Lee, Yong-Pil Park and Min-Woo Cheon^a
Dongshin Univ

Abstract : Low level laser therapy has various therapy effects. This paper performed the basic study for developing the Low Level Laser Therapy Equipment for medical treatment. The apparatus has been fabricated using the laser diode and microprocessor unit. This equipment was fabricated using a micro-controller and a laser diode, and designed to enable us to control light irradiation time, frequency and so on. In this study, the designed device was used to find out how infrared laser diode affected the collagen formation. For in-vivo test, a round wound 1cm in diameter was cut from the test animal whose epidermal and dermal layers were removed. Test animals were relieved for 24 hours after wounds had been excised and then the infrared laser irradiation group was given irradiation therapy over 9 days one 20 min per day. As a result, More collagenosis occurred in the order of infrared laser irradiation and non-irradiation group. Collagenosis is closely related to wound repair and it was found that infrared laser irradiation groups had more collagenosis and was quicker to recover from wound than non-irradiation group.

Key Words : Infrared, Irradiation, Wound, Collagenosis, Low level laser therapy