

عنوان مقاله:

Effect of ultrasound in produce collagen and measure skin thickness bytransducer 40 MHz

محل انتشار:

همایش بین المللی پزشکی، بهداشت عمومی و علوم زیستی (سال: 1395)

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خلاصه مقاله:

Introduction: The interplay of Low- frequency ultrasound waves with the skin processes the basis for noninvasive, rapid and available diagnostic imaging. This study the basic platforms of skin ultrasound and it is usage in the different regions of dermatology and assess the result of ultrasonication on collagen fibril organization. Ultrasonography using a 40-MHz frequency transformer provides more accurately to measurement the skin width. Condition for measurements of substrate width and density were also good and may be helpful to recognize earlychanges in tissue totality prominent to tissue hurt. Extra data are necessary about the association of changes in substrate thickness and layer compression to probable tissue hurt. Materials and methods: 10 Guinea pigs have degree burnt in their back skin. Guinea pigs subjected to high-frequency ultrasound for 21 days. Under anesthesia, continuous ultrasonic energy (frequency, 1 MHz; intensity, 0-2 W/cm²) was delivered to the back skin of the US group for 5 min per day, 7 day per. After 21 days the entire skin thickness was observed with the 40 MHztransducer and by that we realized the production of collagen. Results: As can be seen from the conclusion of SEM and TEM, the ultrasonic therapy affects the organization of collagen fibers. These results infer that ultrasonic penetration at the fibril formation procedure of the collagen and can see by images the 40 MHz ultrasound transformer that extended burn skin width. The purpose of this study was to contrast the communication between skin width and concord and to measure the resolution of 40-MHz ultrasound while measuring the width ofdifferent skin. Conclusion: Textural attributes of collagen gels also .changed after ultrasonication in second degree burn and we can see by a 40 MHz transformer skin width

کلمات کلیدی:

High frequency ultrasound, Skin collagen, Burn, Guinea pigs

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