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EXTRACORPOREAL SHOCKWAVE THERAPY FOR TREATMENT OF KELOID SCARS

The purpose of this investigation was to study the effectiveness of Extracorporeal Shockwave Therapy (ESWT) for the treatment of keloid scars, and compared the results with intra-lesional steroid injection. Thirty-nine patients were randomly divided into 22 in ESWT group and 17 in steroid group. The ESWT group received 3 ESWT treatments in 6 weeks. The steroid group received 3 intra-lesional triamcinolone injection in 6 weeks. The evaluations included gross morphology, functional outcome, local blood flow perfusion, biopsy for histopathological examination and immunohistochemical analysis. Both groups showed significant improvements in appearance with less discoloration, flatter and softer consistency and more elasticity of the lesions but unchanged size after treatment. Overall, there was no significant difference between two groups. Both groups showed comparable functional scores, POSAS patient and observer scales. The blood flow perfusion rates were statistically not significant between two groups before and after treatments. Histopathological findings revealed no significant difference in cell count, cell activity and cell concentration between two groups. After ESWT significant decreases in collagen type I, type III and Masson Trichrome stain were observed after ESWT as compared to steroid group. However, very little changes were noticed in angiogenesis, inflammatory cytokines, tissue proliferating and apoptosis, and no statistical significance was noticed between two groups before and after treatment. This study revealed that ESWT showed comparable functional outcome, POSAS patient and observer scales as compared to steroid injection for keloid scars. Treatment of keloid scars with ESWT resulted in significant decreases in collagen fibers and increases in MMP-13 enzyme.

Biography

Ching-Jen Wang graduated from National Taiwan University, College of Medicine. He is a board certified orthopedic surgeon and currently holds a clinical faculty at Chang Gung University College of Medicine and serves as a consultant orthopedic surgeon of Kaohsiung Chang Gung Memorial hospital, Taiwan. He has published more than 236 papers in reputed journals and has been serving as the reviewer in many journals. His primary interest and area of expertise include sports medicine, knee and hip replacement surgery, shockwave medicine and tissue regeneration.

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