



Potential of shock wave therapy in decubitus foot ulcer – clinical efficiency and objective assessment

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Abstract:

Current studies confirm the clinical utility of shock wave therapy (SWT) in chronic wounds including venous leg ulcers (VLU), pressure ulcers (PU) and decubitus foot ulcers (DFU). Nevertheless, there is a demand to conduct research in this area using objective measurement methods. The aim of this case study was to assess the effectiveness of the SWT procedure in a DFU patient after a toe amputation. The patient underwent a single radial SWT procedure with CELLACTOR® SC1 device (Storz Medical, AG, Tägerwilen, Switzerland). Treatment parameters included: number of shots 300 baseline + 100 per each cm², pressure of 2.5 bars, energy of 0.15 mJ/mm² and frequency of 5 Hz. Planimetric smartphone application (Swift App., Swift Medical, Canada) was used to assess the effects in objective manner. The measurements were taken directly before and one week after the SWT procedure. Planimetric evaluation showed significant improvement in the wound surface. A decrease in all metric parameters of the wound was observed: total area by 50% (from 5.8 to 2.9 cm²), length by 21% (from 3.1 to 2.9 cm) and width by 28% (from 2.7 to 1.9 cm). In conclusion, ESWT seems to be a promising therapeutic option in DFU management.

Biography:

Robert Dymarek has completed his PhD at the age of 27 years from Wrocław Medical University (WMU), Poland. He is an Assistant Professor at The Faculty of Health Sciences of WMU. He has published 31 papers in reputed journals listed in Journal Citation Reports. He is also a reviewer of many impact factor journals. He is a member of European Pressure Ulcer Advisory Panel (EPUAP), European Wound Management Association (EPUAP) and International Society for Medical Shockwave Treatment (ISMST).

Recent Publications:

1. Efficacy of Selected Electrical Therapies on Chronic



- Low Back Pain: A Comparative Clinical Pilot Study. Rajfur J, Pasternok M, Rajfur K, Walewicz K, Frasz B, Bolach B, Dymarek R, Rosinczuk J, Halski T, Taradaj J. *Med Sci Monit.* 2017 Jan 7;23:85-100. doi: 10.12659/msm.899461. PMID: 28062862
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