

EXTRACORPOREAL SHOCK WAVE THERAPY IN A “WOUND CARE SERVICE”

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Extracorporeal Shock wave therapy (ESWT) is a regenerative biophysical therapy, that has been widely used in orthopaedic rehabilitation medicine for decades. A growing number of clinical studies demonstrate that ESWT, as “defocused” form (dESWT) treatment, is a feasible non-invasive method for improving chronic wound healing. Shockwave energy increases angiogenesis and growth factors production, by modulating inflammation within the wound bed and the surrounding tissues. Additionally, increase in metabolic rate and initiation of cell proliferation and differentiation have been documented. Defocused shock wave has been used in our hospital’s wound care clinic for 6 years. Once we have made a thorough diagnosis, we treat flat or cavitory ulcers that don’t respond to modern outpatient clinic treatments (bandaging, advanced treatment, vacuum device therapy, antibiotic treatments, etc).



We are using a Storz Duolith device with unfocused waves

DESCRIPTIVE STUDY: length of study 6 years

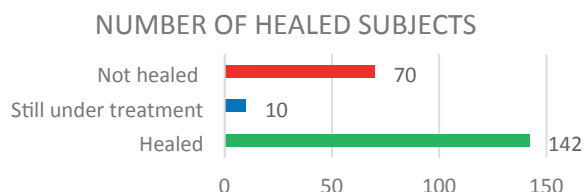
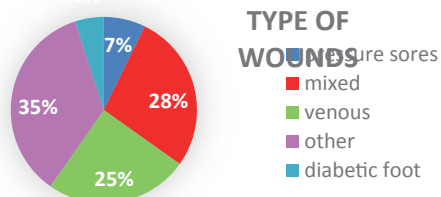
Subjects: 222 patients (male and female subjects), with various types of lesions (venous, mixed, pressure, diabetic).

Treatment: 1 dESWT treatment/week; for a total number of 350 + 100 pulses/ cm² for every session.

Energy level was differentiated according to the characteristics of the wound (this is a novelty in this field):

- 0.33 - 0.56 mJ/mm² for deep wounds with slough
- 0.25 - 0.33 mJ/mm² for superficial wounds, with Slough
- 0.08 mJ/mm² for superficial wounds without inflammation
- 0.05 - 0.08 mJ/mm² for superficial, inflamed and painful wounds.

Wound preparation was with polyurethane film; Inert dressing after treatment with antibacterial antiseptic (Cutimed®).



CLINICAL CASE

As a clinical example, we propose the case of a 62-year-old male, affected by an ulcer on the middle third of his right leg (10 x 9 cm) for about 6 months. Medical history: hypertension and diabetes mellitus. He never underwent planned surgery.



time of healing : 47 days

Treatment: total of 12 ESWT sessions (Storz Duolith, defocused source), weekly applications.

Result: the subject was pain-free already after 4 ESWT treatments. There was no hospitalization and no change of everyday life. We used only oral antibiotic treatment . TIME OF HEALING : 47 DAYS

CONCLUSIONS: ESWT can be considered an effective regenerative therapy in wound care.

The advantages are noteworthy. Treatments are . The process is quick. It is simple to use with trained staff and provides pain relief. Shock wave apparatuses have orthopaedic, sport, and aesthetic medicine applications.

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