

Summation of the Experiences Using Defocused ESWT for Chronic Skin Lesions in the Trauma Center Meidling

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Device and producing company:

Dermagold, Activator, MTS/TRT

Introduction:

Treating complicated soft tissue wound conditions (delayed/non-healing wounds) is extremely challenging but extracorporeal shock wave therapy seems to have great potential in this field. We present the annual, almost traditional, update from our clinical ESWT experience between 2004 and 2008.

Methods:

Patient study enrollment was done during routine clinical work between August 2004 and December 2008. Patients of both sexes with soft tissue wounds of different etiology persistent longer than 1 month were included. The primary outcome measure was rate of wound closure. Secondarily, different correlation analyses (e.g. defect size, age, etiology) were performed.

Results:

Through December 2008, 390 patients were treated with unfocused extracorporeal shock waves (male: 57%, female: 43%), primarily in an outpatient clinical setting. Mean age was 57.8 ± 20.2 (2008: 50.4 ± 18.0) in males and 61.6 ± 19.2 (2008: 71.7 ± 16.2) in females. As found in the analysis of 2008, the main wound location was the lower extremities (lower leg: 44.6%; foot: 13.9%) followed by the upper extremities. Patients who were treated due to wound healing disturbances (39.5%) and posttraumatic necrosis (31.3%) were most common, as they were last year, but percentages showed a slight increase over last year. In total 72% of the wounds treated with ESWT healed completely (2008: 69%). We were also able to see a slight decrease in non-respondent wounds (5.3% in 2009 vs. 5.9% in 2008). Fortunately, the percentage of patients who missed follow-up also decreased to 15.4% (23.7% in 2008). The mean of ESWT sessions was 2.9 times with a range from 1 to 15 sessions in total. The mean of total amount of applied pulses was 1,483 (range from 100 to 44,700). The healing time for wounds successfully treated with ESWT was a mean of 43.8 days (± 45). In recent analysis a correlation was found between greater wound size and non-healing wounds, as was found in 2008. Again, a correlation was also found between age and therapy responsiveness. The older the patient, the worse the prognosis of outcome with ESWT. First experiences (long term follow-up) with wounds which are healed in response to ESWT show smooth, good relocatable scars. In addition, in treating hypertrophic, atrophic scars with shock waves we observed scar reduction concomitant with quality improvement and patient report of pain reduction.

Conclusion:

ESWT shows consistently excellent results in treating sub-acute and chronic wounds which are partly non-responsive to standard care.