

The relationship between wound healing and pain relief after the treatment with BRH-A2 system

Dr. Yelena Granovsky, PhD

Senior Lecturer, the Lab of Clinical Neurophysiology Technion Medical School; Neurology Department, Rambam Health Care Campus Haifa, Israel

The report was prepared under the guidance of Prof. D. Yarnitsky

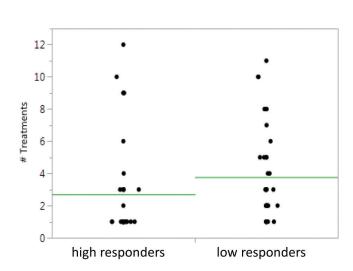
The sample size consists of patients of various etiologies that received treatment with BRH-A2 system for the wound healing.

The main study group consists of Israeli patients (N=71; 30 females; mean age 78.8±11.5 years). The clinical characteristics of the patients group is presented in Table 1.

Parameter	Value ± SD
Number of wounds	2.5±1.6
Wounds duration (months)	5.4±8.1
Number of treatments to pain relief	3.2±3.0
Pain prior to the treatment (0-10 VAS)	6.6±2.5
Pain after the treatment (0-10 VAS)	2.1±1.9
Pain reduction (in %)	67±22

Correlation analysis did not find a significant relationship between pain reduction and any of the demographic or clinical parameters. However, dividing the patients into high or low treatment responders (based on the median value of 75% of pain reduction) indicated that the patients that responded with ≥75% of pain reduction (high responders, N=37) needed a significantly smaller number of treatments (3.8) in order to achieve pain relief than those with <75% pain reduction (low responders, N=34), (2.7); Wilcoxon non-parametric P=0.007.

Figure 1



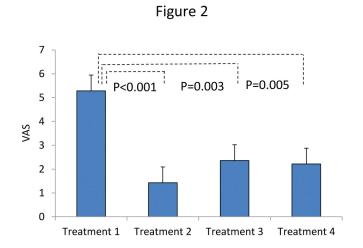


In addition, data concerning pain scores and the wound size per each treatment for patients who had at least 4 sequential treatment sessions were provided for 11 patients from the Italy site, and for 3 patients from the Israeli site. No demographic or clinical data were provided in addition to this.

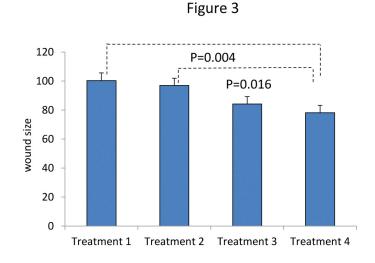
Based on this, a repeated measures ANOVA (rmANOVA) was applied in order to understand the dynamics of pain relief vs. the dynamics of wound size decrease in 14 patients along 4 treatment sessions, and in 12 patients along 6 treatment sessions.

Pain relief and wound size decrease along 4 treatment sessions:

Significant effect of the treatment sessions on pain scores was observed (P<0.001). Pain decreased significantly after the 1st treatment session (P<0.001) with no further decrease along sessions 2^{nd} - 4^{th} .



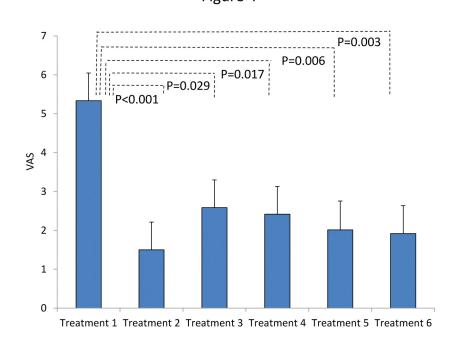
Similar to the pain scores, significant effect of the treatment session on the wound size was found (P=0.002). However, the decrease in the wound size was observed only after 3rd treatment session; the wound size at the 4th treatment session was significant different from the wound size at 1st (post hoc P=0.004) and from the 2nd session (post-hoc P=0.016).





Pain relief and wound size decrease along 6 treatment sessions:

Figure 4



Significant effect of the treatment sessions on pain scores was observed (P<0.001). Pain decreased significantly after the 1st treatment session (P<0.001) with no further decrease along sessions 2nd - 6th.

Figure 5

