P-125

Short-Term Pain Relief in Low Back Pain with Repetitive Peripheral Magnetic Stimulation

Doyoung Lee, MD[1], Ikhyun Lim,MD[1], Hongsuk Baik, MD[1], Kyunghoon Min, MD, Ph.D.[1,2]

[1] *Department of Rehabilitation Medicine, CHA Bundang Medical Center, CHA University School of Medicine, Republic of Korea*

[2] *Rehabilitation and Regeneration Research Center, CHA University, Republic of Korea*

Introduction

- This study aimed to investigate the effect of repetitive peripheral magnetic stimulation (rPMS) on low back pain treatment, based on the stimulation intensity

Subjects and Methods

Study design & Study participants

- A randomized, crossover study was conducted, enrolling eight patients with low back pain.
- Participants were randomly allocated to two groups to receive either one session of low-intensity rPMS (10%) (n=4) or high-intensity rPMS (40%) (n=4) with a one-week washout period.
- rPMS was delivered using a magnetic stimulator (Salus Talent Pro® , REMED company) over the lumbar area at the pain site while sitting or lying prone, with a frequency of 20Hz and an on-off period of 5s-5s for 20 minutes.

Measurement method

- The primary outcomes were measured using the numeric pain rating scale (NRS) before, immediately after, 1 day, and 3 days after the intervention.

Statistical analysis

- The Wilcoxon-Mann-Whitney test was used to compare differences between the groups at each visit.

Table 1. Patients' characteristics, mean ± SD or %.

	rPMS patients (n=8)
Age	68.00 ± 8.00
Sex, n (%)	
Male	6 (75)
Female	2 (25)
Location, n (%)	
L1	2 (25)
L3-4	4 (50)
L5-S1	2 (25)
NRS (at baseline)	5.50 ± 1.04

Table 2. CFB Scores for NRS score

	NRS (CFB) Mean (95% CI)		
Intensity	10 %	40 %	**p-value**
Day 0 (After treatment)	-1.75 ± 0.75	-2.25 ± 0.75	0.686
Day 1	-1.50 ± 0.87	-2.00 ± 0.41	0.886
Day 3	-0.75 ± 0.75	-1.75 ± 0.63	0.486

CFB, change from baseline; NRS, numeric pain rating scale
* p<0.05, by Wilcoxon-Mann-Whitney test

Result

- Subject characteristics are described in Table 1.
- There was no significant difference between the two groups immediately, 1 day, and 3 days after the intervention. The results are summarized in Table 2.

Conclusion

- The comparative analysis between the low-intensity and high-intensity groups of rPMS treatment did not reveal significant differences.
- This suggests that the intensity of rPMS treatment may not significantly impact the treatment of patients with low back pain.
- Therefore, these results may provide flexibility in selecting treatment intensity and delivering personalized treatment for individual patients when applying rPMS treatment.