

VIBETECH™ Pilot Clinical Data

Effects of a single VibeTech treatment on pain relief in the lower extremities and low back Study involving skilled nursing patients receiving a VIBETECH™ treatment (n=8)

A single, 10-minute VIBETECH™ treatment session provided immediate pain relief in the lower extremities and low backs of skilled nursing patients experiencing pain before treatment (Figure 1). Pain is present in 45-80% of nursing home residents at any given time (Pieper et al., 2011). Moreover, low back pain is present in 80% of the population at some point in their life and is present in 15-20% of the population annually (Cleveland Clinic, 2017). With pain being a major cause of disability in adults, it is imperative that patients receive proper pain management to restore function and quality of life. VIBETECH's solution can offer significant relief in minutes. The treatment can even be used by patients who are contraindicated for other pain management techniques. Musculoskeletal pain reduction can occur due to muscle fibers stretching more uniformly after vibration activation (Riley, 2014), while neurological pain reduction is postulated to occur via vibratory analgesia (Hollins et al., 2014).

Protocol

- Resistance loading: 25-60 lbf
- Vibration stimulus: 0.2-1.0 g x 30 Hz
- Treatment: one 10-minute session

Note: Treatment was administered to patients as part of their standard care. Therapist chose treatment parameters based on each patient's needs and recorded pain data in their treatment notes.

Assessments

- Numeric Rating Scale for Pain: Participants new to VibeTech treatment were asked to rate their pain level in their lower extremities and low back on a numeric rating scale (0 indicating no pain, 10 indicating the worst pain imaginable) during standing or wheelchair transfer just prior to treatment and again just after treatment.

Results

Pain before treatment = 7.25+/-1.49 (μ +/-SD)

Pain after treatment = 3.50+/-2.93 (μ +/-SD)

Conclusions

Pain was significantly reduced by treatment ($p < 0.05$), indicating that a single VIBETECH™ session can immediately reduce pain in the lower extremities and low back.

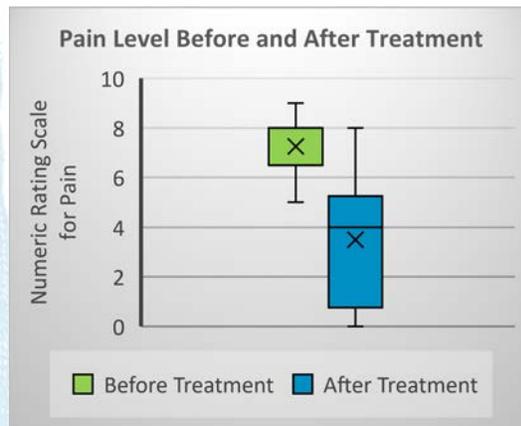


Figure 1. Changes in pain level before and after a single VIBETECH™ treatment (data represent mean \pm standard error).

References

1. Pieper et al. The implementation of the serial trial intervention for pain and challenging behaviour in advanced dementia patients (STA OP!): a clustered randomized controlled trial. BMC Geriatr. 11:12. doi: 10.1186/1471-2318-11-12 (<http://www.ncbi.nlm.nih.gov/pubmed/21435251>) (2011)
2. Cleveland Clinic, Chronic Back Pain Overview, website: <https://my.clevelandclinic.org/health/diseases/16869-chronic-back-pain-overview> (published 2017)
3. Riley, D. Remarks made during presentation to Ovation Jewish Home (Milwaukee, WI) (September 2014)
4. Hollins M, McDermott K, Harper D. How does vibration reduce pain? Perception 43(1):70-84 (2014)