

POSTER PRESENTATION PP24

Understanding Pain Pathways and evidence on effectiveness of Pain Management with newer technologies Focus Shockwave, High Intensity Laser, SIS and Radio-Frequency Therapy

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ABSTRACT

Background & Objectives: Physiotherapists encounter patients' pain issues every day in their clinical practice, be it patients with musculoskeletal or neurological dysfunction or the elderly population. A comprehensive understanding of the mechanism of pain, such as pain gait control theory, endorphine release theory, and pain modulation theory, will help understand the mechanism of pain and find the most appropriate strategies to manage pain in different phases such as acute, sub-acute and chronic. In the last 5 years, there have been various emerging technologies to manage pain, such as Focus Shockwave, Radio-frequency Therapy, Super Inductive Stimulation, and High Intensity Laser. Understanding the interaction of these technologies at a cellular level will help us understand and effectively manage pain at different stages. There is enough available evidence for clinician to make decisions on which technology to use during different stages and severity of pain. **Objectives:** The objective of this research was to understand pain and find available research evidence in management of pain. **Methods:** We conducted searches and looked at different search engines such as PubMed, Cochrane Search, and various physical therapy journals to compile the available research evidence. We divided research papers and meta-analyses into four categories as per modalities: a) High-Intensity Laser b) Super-inductive Stimulation c) Radio-frequency and d) Focus Shockwave. We evaluated about 120 research articles to ascertain modality effectiveness. **Results:** The results show that there is sufficient research evidence to support the use of these technologies for pain management; however, not all technologies are effective at every stage of the pain cycle or for all levels of pain severity. All the modalities should be used with caution for different conditions. **Conclusion:** Physiotherapy practice is evolving fast with emerging technologies. Physiotherapy clinicians need to stay abreast of incoming technologies to manage and improve the quality of patient care. Understanding modalities and their effects at the tissue level will help implement evidence-based practice at the workplace. There is available evidence to shape a clinical practice, though more research studies may be required in some areas.

Keywords: Pain Management; Pain Pathways; Physiotherapy; Emerging Technologies; Evidence-Based Practice; Physical Modalities

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