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PHYSIOTHERAPY RELIEVES PAIN AN EVIDENCE-BASED PRACTICE

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Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or injury, or described in terms of such damage or injury. Physical rehabilitation emphasizes the use of modalities such as heat, cold, and electricity to relieve pain. Heat, one of the oldest modalities to relieve pain, can also decrease muscle spasm and improve function superficial heat can be provided by means of hot packs, hot water bottles, hot moist compresses, electrical heating pads, or chemical or gel packs. Deep heating (diathermy) is achieved by converting another form of energy to heat. In shortwave diathermy, high-frequency electrical currents are converted to heat, while microwave diathermy uses electromagnetic radiation as the source. Electricity has been a pain treatment modality since ancient times. The most common mechanism for applying therapeutic electricity is Transcutaneous Electrical Nerve Stimulation (TENS), Interferential therapy (IFT). Electro galvanic stimulation (EGS), electrical muscle stimulation (EMS) and neuroaugmentative stimulation are other rehabilitative methods that employ electrical current. TENS involves the delivery of electrical energy across the surface of the skin to stimulate the peripheral nervous system is based on the gate control theory of pain modulation. TENS is most effective in neuropathic pain such as complex regional pain syndromes (reflex sympathetic dystrophy and causalgia), phantom pain, and post herpetic neuralgia. Empirical and experiential evidence indicates that TENS, in selected patients, can provide an alternative to medications and improve the individual's function. However,

several trials and systematic reviews indicate that a large, perhaps major, component of pain relief after TENS is due to a placebo effect.. Ultrasound, first introduced for medical use in the United States in the late 1940s, uses high-frequency acoustic vibration that is converted into heat. Deep-heating modalities increase temperature to depths of 3–5 cm. Ultrasound is the preferred treatment in most painful disorders, especially those arising from soft tissues and ligaments, as it has greater penetration and also nonthermal effects, such as increasing extensibility of tissues.

Conclusion: Ultrasound has greater penetration effect hence used widely for pain relief for soft tissue and ligament injuries and TENS for neurological conditions.

Biography

I am Natarajan Venkatesh (N. VENKATESH) working as Professor in Faculty of Physiotherapy, in Sri Ramachandra University, Chennai – 600 116, India. I have been in clinical and teaching Physiotherapy for the past 25 years. I am PhD scholar. I am working on Influence of Yoga on Autonomic Nervous System. Honor of Awards received: Distinguish Service Award by the Indian Association of Physiotherapists on 23.01.05. —“Best Teacher Award” (Chosen by Vice Chancellor, The Tamil Nadu Dr. MGR Medical University on 05.09.2011) — Fellowship Award – 51st by The Indian Association of Physiotherapists 2013 (FIAP).

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