

Use of e-stem in physical therapy

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USE OF E-STEM IN PHYSICAL THERAPY USE OF E-STEM IN PHYSICAL THERAPY AND ITS VALUE TO THE PATIENT. As human beings live their lives day by day, their bodies come into contact with many environment hazards which tend to influence their normal functioning. The results of this disturbance to the individual health are paramount and can not be ignored. Some are too powerfully that they can not be prevented by human immune deficiency therefore there is need to have other measure to treat and maintain good human health. Scientists, doctors and other medical professionals have come up with what they refer as physical therapy. (Wells PE Frampton V, Bowsher D. 1994)). Physical therapy is a health care that is provided by a physical therapist and involves treatment of disorders of the body muscles, bones or joints.. Physical agents that can be used by the therapist includes, heat water, light, manual and electronic massage. Under the electronic category we have the Electronic Stimulation (E-STEM). (Cameron MH. 1999). Electronic Stimulation can be defined as an electrical device used in medical field that sends current through unbroken skin through small electrodes that target muscles. It can also be referred as physical therapy used to strengthen muscles and promote healing to the patient. E-stem physical therapy can only be determined and ordered to the patient by a physician when he has fully examined his condition and concludes that such treatment would be of much benefit to the patient. Physical therapy is offered to both adults and children. A patient can only succeed in therapy due to hard work and a positive attitude. Use of electrical stimulation in physical therapy is useful in treating different medical diseases, orthopedic injuries and sports injuries. Disorders which can be treated using electrical stimulation include, muscular illness, neurological, chronic, phantomlimb, obstetric and

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cardiopulmonary. Electrical stimulation has many roles in physical therapy and the most common is control of pain to the injured patient during and after operation. Trans-cutaneous Electric Nerve Stimulation (TENS) and Interferential current are ways in which E-Stem can be used to relief pain to a patient. Pain experienced by a patient is that subjective description by the injured individual that differs across gender, culture, social-economic upbringing and patient life experience. A patient will always expecting to be free from pain one's he/she is under physical therapy but this is not the case. Pain is something that can not be compensated by any human activity since it's an emotional feeling. The capability of electrical stimulation to regulate pain in patient since its introduction in medical field has been criticized and questioned. Researchers have termed it to be an effective modality while on the other hand an educational study has described it to be more effective than a placebo. (Cameron MH. 1999). The debate has contributed to evolution of two theories to help in explaining the context matter. These theories are namely, Gate control and Opiate-mediated control. Gate control theory illustrates how small-space (diameter) and nociceptive nerve fibers that contain little myelin that transmit painful stimuli to the spinal cord where they are then transmitted to the brain. However when an E-Stem is used in physical therapy, it may reduce the sensation of pain been experienced by increasing the activation of myelin hence minimizing the transmission of pain to the spinal cord. This causes the infected patient to experience less pain. On the other hand, Opiate-mediated theory is concerned on the accumulation of natural opiates in the human body which are produced in the pituitary glands as beta-endorphins' and in the spinal cord as enkephalins. Opiates are normally the body pain suppressors and <https://assignbuster.com/use-of-e-stem-in-physical-therapy/>

when the patient is under stimulation, the sensory nerves encourages the availability of these opiates. Endorphins influences special receptors site in the central nerves system where they block the perception of pain. As use of E-Stem in physical therapy aims at controlling pain in patient body, it emerges a big difference in the use of (TENS) and interferential current. Interferential currents work at higher frequencies of around 4, 000-5, 000Hz and are said to penetrate to deeper tissues. TENS operate at (1000 ohms vs. 500ohms). Most patient prefer interferential than TENS currents. The depth of targeted tissue makes the therapist to determine which current to use among the two. Deeper tissues respond better to interferential current while more superficial tissues respond well to TENS. The physical therapist uses E-Stem to enhance muscles contraction to strengthen them through nerve stimulation. E-Stem stimulates sensory nerves to reduce pain and alter healing process. The location of the electrode when using either interferential or TENS matters for the success of the modality. Elctrode can be placed directly or very cross to the painful area. Electrodes are placed cross to the injured area when interferential current is used but this is may not be appropriate for all patients since some may be into much pain to tolerate stimulation. Other areas where electrodes can be placed to maximally control amount of pain relief is along neurogically areas such as nerve roots and trigger points. CONCLUSION. E-Stem is modality that is designed to relief pain so that the patients can continue with their lives with fewer restrictions and limitations. Despite having confusion surrounding the use of interferential current and TENS, both are effective modality to relief pain from the patient and they are of high value to him. The best thing is to allow the physical therapist to treat the source of the patient pain and it will

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