Eccentric training for tendinopathy: Current review of the literature

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Traditionally pain associated with tendon dysfunction has been attributed to inflammation. More recent evidence suggests a more complex degenerative process, particularly in cases that are not self-limiting. The term tendinosis is used to describe the cellular level degenerative changes that occur in a tendon. There are a wide range of intervention options for the treatment of tendon dysfunction. Included among these interventions is eccentric training for tendinosis. Successful outcomes for this treatment have been reported in the literature for over twenty years. The purpose of this presentation is to provide participants with a review of anatomical, biomechanical, and pathological considerations for tendon dysfunction while also presenting recommendations for eccentric training based on the most current research evidence.

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Report on a case series investigating a neurostimulation device for the treatment of pain and improvement of mobility and function following elbow surgery

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Background: A group of 7 patients received neurostimulation (Stimpod) post tennis or golfer's elbow surgery as their sole treatment to relieve acute postoperative pain and improve mobility and function. Patients undergoing the above-mentioned surgery have had chronic pain with and without neuropathic symptoms for a prolonged period. There is usually severe injury with active inflammatory processes due to the surgery. It was thought that treating these patients aggressively early post-operatively may expedite pain relief and the healing process.

Method: After their surgery, 7 patients were given neurostimulation for 3 treatments of 20 minutes each on the brachial plexus during the ten days before the splint was removed. This was followed by 6 treatments, twice weekly of 20 minutes each after the splint was removed. At each of these treatments 5 mins stimulation were administered to four areas: The nerve supply 1) superior and 2) inferior to the elbow and 3, 4) on either end of the wound. Patients were evaluated for pain with the visual analogue scale, movements of flexion and extension measured with a goniometer, strength and flexibility with a 12-movement activity scale, status of the wound and satisfaction with treatment, mobility and function. These measures were re-evaluated telephonically at one, three and six months after the last treatment.

Results: Significant pain relief was achieved by all of the seven patients before the splint was removed at the 4th treatment. Pain relief, range of movement and function was greatly improved at the final (9th) treatment by 6 of the 7 patients and this was maintained with nearly full improvement of the above parameters for most of the participants at one month after the last treatment. Two patients had to have re-operation due to requiring more extensive surgery in the one patient and falling and injuring the original surgical site in the other patient. At three and six months after the last treatment full improvement in all the parameters above was maintained in the remaining five patients who also had excellent wound healing and satisfaction with their treatment, mobility and function.

Conclusion: It appears the neurostimulation (Stimpod) has the capacity to improve acute post-surgical pain and reduce pain, improve mobility, function and stimulate wound healing once the splint was removed. This treatment is relatively cost effective, is non-invasive and of short duration. Positive effects were all maintained at six months.

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