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Abstract

A group of seven patients received neurostimulation (Stimpod) post-tennis or golfer's elbow surgery as their sole treatment to relieve acute post-operative pain, 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, seven patients were given neurostimulation for three treatments of 20 min each on the brachial plexus during the 10 days before the splint was removed. This was followed by 6 treatments, twice weekly of 20 min each after the splint was removed. At each of these treatments 5-min stimulation were administered to four areas: the nerve supply (1) superior and (2) inferior to the elbow and (3 and 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 six of the seven 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 that 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 6 months.

Keywords

- Neurostimulation;
- Elbow surgery;
- Acute pain;
- Mobility