

Deep Oscillation Therapy in Sports Injuries

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Editorial

Deep oscillation therapy (DOT) is a modality that has been used clinically to treat lymphedema with enhanced pain alleviation and swelling reduction in patients [1,2]. Additional clinical applications have been in wound healing [3] and fibromyalgia syndrome [4]. The modality is an assist vibrational technology that applies an intermittent electrostatic charge to deep tissue, even postulated to reach the collagen matrix [5]. It provides cyclic movement in the deep tissues leading to mechanical pumping and the redistribution of fluids. Hence, its application in treating lymphedema and edema.

In contrast to its specific clinical application in fluid redistribution, little research has been done using DOT for sports recovery or rehabilitation. A German group who had used DOT clinically for edema, pain reduction, anti-inflammatory effect, wound healing, promotion of mobility, and improvement in tissue trophic response during rehabilitation, performed a study using DOT for 49 sports injuries in soccer players [6]. They found both subjective and objective positive results, with a significant reduction in pain. On the VAS, pain reduced from 8.7 to 2.1 over 6 weeks. A study of DOT on treatment of lateral epicondylalgia by O'Brien and Watson demonstrated improvements compared to a control group [7]. Standard medical treatment was given to the control group and DOT was added to the standard intervention in the experimental group. Both groups improved over the 6 week study on both function and pain alleviation. However, there was significant function enhancement with the DOT group versus standard care at the end of the treatment period. Strength of the study was a follow up on subject status at 6 months, with no additional treatment.

There is a paucity of articles on DOT. However, these initial promising outcomes from pilot studies in sports applications

demonstrate the need for further research on DOT influence on recovering from sports injuries. Elucidation of the mechanism whereby DOT may be affecting results should also be explored. At present, from the clinical research that has been reported, fluid dynamics may be a key area for focus. DOT warrants further study as a potential treatment option that can influence clinical manifestations of pain syndromes or sports injuries.

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