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The Effectiveness of Electrophysical Agents in the Management of Lateral Elbow Tendinopathy (LET)

Stasinopoulos D*

Department of Physiotherapy, University of West Attica, Greece

***Corresponding author:** Dimitrios Stasinopoulos, Department of Physiotherapy, Faculty of Health and Caring Sciences, University of West Attica, Agiou Spyridonos 28, Egaleo, 12243 Athens, Greece, Tel: 6944743456; Email: dstasinopoulos@uniwa.gr

Editorial

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Abbreviations: LET: Lateral Elbow Tendinopathy; EA: Electrophysical Agents; ESWT: Extracorporeal Shock Wave Therapy; LLLT: Low-Level Laser Therapy; HILT: High-Intensity Laser Therapy; MA: Meta-Analysis; RCTs: Randomized Control Trials.

Editorial

The most common tendinopathy in the elbow area is Lateral elbow tendinopathy (LET). The diagnosis of LET is simple and quick. The majority of clinicians advocated a conservative approach. Physiotherapy is usually provided. Manual techniques, external support, soft tissue manipulation, Electrophysical Agents (EA), electrotherapy and heavy-slow resistance exercises are recommended physiotherapy approaches for the management of LET.

EAs (no electrical energy modalities) such as extracorporeal shock wave therapy (ESWT), therapeutic ultrasound (TUS), and phototherapy (Low-Level Laser Therapy - LLLT and High-Intensity Laser Therapy - HILT) are one of the most popular recommended physical therapy modalities for the management LET. However, clinical studies do not support the effectiveness of the above-reported modalities. Three recently (after 2020) published systematic reviews (SRs) and meta-analysis (MA) on the effectiveness of ESWT for the management of LET revealed contradictory results [1-3]. Two of them reported superior outcomes of the ESWT compared with placebo ESWT or other modalities in the relief of pain and functional impairment (grip strength) [1,2]. Meanwhile, Karanasios, et al. [3] found that ESWT presents no clinical benefits compared with placebo ESWT or treatment therapy in elbow disability, grip strength and pain intensity at follow-up occasions. The above difference occurred due to the many methodological issues found in the previously reported SRs and MA. Moreover, a SR and MA found that TUS is helpful in relieving pain for LET patients but no such benefit could be found for grip strength [4]. In addition, TUS has no significant advantage against other conservative treatments [4]. Furthermore, an umbrella review found poor results for the effectiveness of LLLT for the management of LET [5]. Finally, two recent SRs found no evidence to support the effectiveness of HILT for the management of LET [6,7].

In a clinical practice guidelines article for the management of LET, a recommendation cannot be made for the use of TUS as a stand-alone treatment and clinicians may use HILT for improvements in pain and grip strength, seen in follow-up periods > 4 weeks to 6 months, for individuals with LET [8].

According to the above findings, someone could support that it is time to stop conducting research with EAs. However, it is not time to stop conducting SRs and MA with the aim of determining the effectiveness of EAs in the management of LET. Many issues can be evaluated in future SRs and MA in order to determine whether EAs are an effective treatment approach in the therapy of LET.

Although many physical therapy techniques have been used in the management of LET, the most effective physiotherapy treatment for LET is an exercise program, in the clinic or supervised [9]. EAs are used as a supplement to an exercise program and not as a substitute for exercise [10]. According to this, the future SRs and MA will determine the effectiveness of EAs combined with exercise programs in individuals with LET.

Furthermore, EAs are dose-response modalities, and the optimal treatment dose (parameters) has obviously not yet

been found in order to be used in rehabilitation protocols [10]. Furthermore, SRs and MA are needed to determine the appropriate protocol. The International Society for Medical Shockwave Treatment, the World Association for Photobiomodulation Therapy and Stasinopoulos et al. recommend ESWT, LLLT and TUS parameters respectively for the management of LET [11-14]. However, clinical studies are needed to support the recommended parameters.

Moreover, the duration of LET symptoms associated with the efficacy of EAs should be determined in a future SR and MA.

Finally, future SR and MA should assess whether the improvements in outcome measures (pain, function, etc.) remain in those patients with longer follow-ups. Answering this question would eliminate the self-limiting natural history of the condition or the placebo effect related to participation in a trial [15].

According to the above issues, the current status of EAs effectiveness in the management of LET is uncertain and provocative. Stop re-examining existing Randomized Control Trials (RCTs) in reviews (SR, umbrella or scoping) because RCTs quality is too poor. Conducting future research avoiding weaknesses in RCT methodology, accounting for 'dosage'/'appropriateness' of EAs in RCTs, SR and MA, and using EAs as a supplement to exercise program.

Overall, it is believed that the issues discussed in this article might help practitioners to improve their clinical ability. It is the intention of the author to generate questions about the optimal EAs approach for the therapy of LET.

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