Abstracts and presentations
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PO-E-01-MON1 THE EFFECTIVENESS OF RADIAL SHOCKWAVE ON UPPER TRAPEZIUS MTRP - A SYSTEMATIC REVIEW

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Background: Active upper trapezius MTrP is a wide phenomenon in population. Many physiotherapy and medical treatment approaches have been recommended to manage. One of the most common physical therapy modalities is the extracorporeal shockwave therapy (ESWT), (Gleitz & Hornig, 2014). There are two types of ESWT, the radial and the focused. The Radial ESWT(RS) is usually proposed for the management of tendinopathies, non-union fractures and other musculoskeletal conditions (Jeon et al., 2012). Investigation of RS' effectiveness is important because of its mechanism of action, like improving microcirculation and igniting tissue regeneration (Heller & Niethard, 1998).
Purpose: Aim of this review was to assess the effectiveness of RS on upper trapezius MTrP, in terms of reducing pain, increasing neck flexibility and functionality. Secondary, this review was made to assess which parameters of RS are ideal, the duration of effectiveness and if RS is better than other physical modalities.
Methods: In this review, articles of the last two decades were searched, written in English in well-known electronic databases such as Medline. Trials accepted had to be randomized clinical or controlled trials referring to humans, referring to inclusion/exclusion criteria and not to be doctoral thesis. Patients had to be in the age range of 18-60, with an active MTrP on upper trapezius, no pathology of the spine, able to be assessed before/after treatment and to be no under any other treatment during the trial. The outcome measures that were under examination in this review, were Visual Analogue Scale (VAS), Range of Motion of the cervical spine (ROM), Pressure Pain Threshold (PPT) and functionality.
Pedro Scale Criteria and Best Evidence Synthesis were used.
Results: Three trials arised, comparing RS with Laser therapy(LT), PNF or Trigger Point Injections (TPI). When RS was compared to LT, short-term results show better improvement (VAS, $p< 0.008$) in favor of RS, where long-term results show no difference between modalities ($p=0.40$), (Taheri, Vahdatpour & Andalib, 2017). Combination of RS with TPI against PNF, show better improvement in favor of the combined therapy for VAS ($p< 0.05$), no significant difference between treatment groups for PPT($p>0.05$) and better improvement for ROM for PNF group($p< 0.05$), (Lee & Han, 2013). When RS is compared with TPI, shows no significant difference for VAS and PPT($p>0.05$), (Lee et al., 2012).
Conclusion(s): In conclusion, there is limited evidence from one study that RS is more effective when compared to LT. Moreover, limited evidence exists that combination of RS and TPI is evenly effective as PNF, while ROM improves after PNF. Limited evidence exists that RS is not more effective than TPI. The existence of limited trials gives reason for further study in the field. Also, the absence of an ideal protocol is another factor supporting the above need. At last, more trials comparing different parameters, different modalities, is important so that the machine is used properly.
Implications: This systematic review has concluded three trials, which is not an enough number for extracting important results for the effectiveness of RS. That indicates the absence of guidelines for clinical therapists.
Key-Words: Radial Shockwave, upper trapezius MTrP, Myofascial Trigger Points
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It's a systematic review