

Abstract Preview - Step 3/4

- print version -

Primary track/topic: Electrophysical & isothermal agents

2nd track/topic: Sport & sports injuries

Abstract title: EFFECTS OF ULTRASOUND-GUIDED MEP® (PERCUTANEOUS MICROELECTROLYSIS) IN PATELLAR TENDINOPATHY: A PILOT STUDY

Author(s): Ronzio O.A.^{1,2,3,4,5}, Cupido D.A.¹, Villa C.Á.^{2,6,7}, d'Almeida S.M.^{2,3,4}

Affiliation(s): ¹Instituto Universitario Fundación H.A. Barceló, Ciudad Autónoma de Buenos Aires, Argentina, ²Universidad Nacional Arturo Jauretche, Florencio Varela, Argentina, ³Universidad Maimónides, Ciudad Autónoma de Buenos Aires, Argentina, ⁴Universidad Favaloro, Ciudad Autónoma de Buenos Aires, Argentina, ⁵Universidad Cuauhtémoc, Aguascalientes, Mexico, ⁶Universidad Nacional de la Matanza, Ciudad Autónoma de Buenos Aires, Argentina, ⁷Instituto Universitario CEMIC, Ciudad Autónoma de Buenos Aires, Argentina

Background: Patellar tendinopathy is an orthopedic chronic condition characterized by dysfunction, structural histological changes and pain in the lower pole of the patella. VISA-P score is used to evaluate patellar tendon pain and functionality. Algometry is a validated tool to assess pain, which measures pressure pain threshold (PPT). Tecatherapy is a kind of radiofrequency that generates local diathermy, causing analgesia. Percutaneous Microelectrolysis (MEP®) is an alternative for treating tendinopathy that uses galvanic current in the order of micro Amperes, applied with an acupuncture needle connected to the cathode. This invasive technique claims to promote analgesia due to H2 liberation and controlled local inflammation caused by NaOH release, leading to the repair of affected tissue. Eccentric exercises have proved to be effective in tendinopathies.

Purpose: The aim of this study was to evaluate the effects of Percutaneous Microelectrolysis (MEP®) combined with Tecatherapy and eccentric exercises on patellar tendinopathy.

Methods: A longitudinal, prospective, systematic sampling pilot study was performed. Seven tendons of five patients were included in the study. Disability was measured with VISA-P. Algometry was performed with a Wagner FDX25 algometer. The evaluation was done before and after 3 sessions. Capacitive radiofrequency was applied with a VIP device, model Tecatherap-Plus during 7 minutes at G3 of subjective temperature scale. MEP was applied with a Sveltia device, version 3.6 and with 0.30 x 25 mm disposable acupuncture needles. A diagnostic ultrasound (Mindray, Z5) was used to guide the procedure. Intensity was increased up to 600 uA. When the patient related "pain", the current was paused. The procedure was repeated until the patient did not relate pain caused by electrolysis anymore. Three sessions were performed, once per week. Treatment was combined with a home based eccentric exercise protocol (3 series of 15 reps, twice per day).

Results: The mean value of VISA-P scale before treatment was 69.43 and after treatment was 88.14. The mean value of PPT before treatment was 4.91 KgF and after treatment was 6.14 KgF.

Conclusion(s): The functional score and the PPT values increased. The use of Percutaneous Microelectrolysis, combined with capacitive radiofrequency and a home based exercise protocol, could be a promissory treatment for patellar tendinopathies. Further studies must be done with a higher n and a control group.

Implications: In some countries shock wave therapy is not available or it is too expensive for the patients. There are many publications about MEP combined with eccentric exercises in other tendons. The application of this kind of treatment could be a cheaper and effective alternative for treating tendinopathies. This pilot study provides more scientific evidence.

Key-Words: Tendinopathies; Percutaneous Electrolysis; Eccentric exercises

Funding acknowledgements: This work has been supported by Instituto Universitario Fundación H.A. Barceló.

Ethics approval: Ethics committee of Instituto Universitario Fundación H.A. Barceló. has approved this work, July 2015.

Presentation Type: Poster Presentation

Conference: WCPT Congress 2017 2-4 July 2017 · Abstract: A-804-0000-01766 · Status: Submitted (checked)

Print

Back