THU0493

A MULTICENTRE RANDOMISED CONTROLLED FOLLOW-UP STUDY OF EFFECTS OF THE UNDERWATER TRACTION THERAPY IN CHRONIC LOW BACK PAIN

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Background: Chronic low back pain established for more than 3 months is one of the most common problems in the world. The prevalence could reach the 33%.

Objectives: To investigate the effects of underwater traction therapy on chronic low back pain.

The primary objective was to prove the hypothesis that underwater traction therapy has favourable effect of LBP using the change in the clinical parameters. Our secondary objective was to evaluate whether it also leads to the improvement in the quality of life.

Methods: A prospective, multicenter, comparative (intervention arm vs. control arm), randomized follow-up study.

Participants aged between 18 and 85 years with more than 3 months low back pain and selected from outpatient clinics.

The participants were randomized to three groups: underwater weight bath traction therapy, weight bath and non-steroidal anti-inflammatory drugs (NSAIDs) medication and only non-steroidal anti-inflammatory drugs (NSAIDs) medication.

During the traction therapy ankle weights were used.

The following parameters were measured before, right after, and nine weeks after the three-week therapy: level of low back pain in rest, level during activity tested using the Visual Analog Scale (VAS); specific questionnaire on back pain (Oswestry); questionnaire on quality of life (EuroQ-ual-5D) and clinical parameters.

Results: 141 participants aged 57.67 (± 13.04) years. All of the investigated parameters improved significantly ($p < 0.001$) in the underwater weight bath traction therapy groups by the end of the treatment compared to the base period, and this improvement was persistent during the follow-up period. There were no significant changes in the measured parameters in the control group except for the Oswestry Disability Index, which may also be the result of that group receiving pain-relieving drug therapy.

Conclusion: Based on our results, underwater weight bath traction therapy, might have favourable impact on the clinical parameters and quality of life of patients suffering from chronic low back pain.

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RELATIONSHIP BETWEEN THE AREA OF THE MEDIAN NERVE CROSS SECTION AND THE CIRCUMFERENCE OF THE CARPUS AS A DIAGNOSTIC TOOL FOR CARPAL TUNNEL SYNDROME

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Background: The diagnosis of carpal tunnel syndrome (CTS) is fundamentally electrophysiological, however, on diagnostic suspicion ultrasonography has been shown to correlate satisfactorily with the electromyogram. The limitations of the ultrasound study of the median nerve in patients

with STC are due to the fact that the intervals of normality of the area of the median nerve cross section (ACTNM) are variable according to the sources consulted, the sex and the anthropometry of the individual.

Objectives: The purpose of this study is to determine whether NMTA can be correlated with a simple measurement such as wrist circumference length (MCL) in patients with electrophysiological diagnosis of TCEs and healthy subjects and used to discriminate them better than with the simple measurement of NMTA.

Methods: We included 50 patients with electrophysiological diagnosis of CTS and 43 healthy subjects of white ethnicity, older and with different anthropometric characteristics. The patients came from the Rheumatology consultations of three different centres. Healthy volunteers were subjects without CTS clinic, thyroid alterations, diabetes or known autoimmune rheumatological diseases whose data were obtained from a previous study. Circumference was measured with a flexible tape measure around the carpus immediately distal to the interstyloid line. The ultrasound measurements were made at the height of the escofoid and pisciforme bones using three different ultrasound scanners according to the head-quarters: Toshiba Nemio XG, 13Mhz linear probe, Samsung HM70a 14 MHz and Logiq e GE 12 MHz. All the measured images were captured for analysis and correction of circumference lengths by an observer not linked to the identity of the subjects nor to their character of patient or control. An association study between wrist circumference and ACTNM was performed for both groups and a correlation index was submitted to a validation test for the determination of sensitivity and specificity.

Results: ACTNM was 11.11 SD 1.18mm² in the control group and 12.73 SD 1.50mm² in the patient group ($p < 0.05$). The LCM was 18.81 DE 1.50cm and 18.72 DE 1.85 ($p = 0.803$). In healthy subjects, the correlation between ACTNM and carpal circumference showed a satisfactory correlation (Coef Pearson 0.809, $p < 0.01$, bilateral) as well as in patients (Coef Pearson 0.878, $p < 0.01$, bilateral). The ACTNM/LCM index in the control group was 0.590 and for the patient group 0.679 ($p < 0.01$). The area under the ACTNM curve was 0.808 EE 0.049 while in the case of the ACTNM/LCM index was 0.954 EE 0.019. The area under the ACTNM curve was 0.808 EE 0.049 while in the case of the ACTNM/LCM index was 0.954 EE 0.019. With an index of 0.62 or a sensitivity of 93% and specificity of 78% are obtained for the diagnosis of CTS.

Conclusion: LCM correlates well with ACTNM in healthy patients. It could be considered a good anthropometric marker for further studies of normal ultrasound ranges of the median nerve. The LCM/ACTNM index is a useful measure to discriminate controls of patients with electrophysiological diagnosis of JTS. In our series, this index exceeds the discriminatory capacity of the ACTNM as an individual measure.

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ROLE OF PLATELET RICH PLASMA IN TREATMENT OF ROTATOR CUFF TENDINOPATHY AND PARTIAL THICKNESS TEAR: FOLLOW UP BY ULTRASOUND

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Background: Shoulder pain is the third most common musculoskeletal reason for seeking medical care. The diagnosis of Rotator Cuff Tendinopathy (RCT), with supraspinatus partial thickness tendon tears and tendinosis, constitutes more than 50% of adult cases presenting with shoulder pains at any time. Platelet rich plasma (PRP) injections are nowadays being used as an alternative for treating the tendinopathies, who have failed to be managed by conservative management.

Objectives: This work aimed to assess the effect of PRP injection under musculoskeletal ultrasound (MSUS) guidance in patients with rotator cuff tendinopathy, and partial thickness tear in comparison with those who received a rehabilitation program only. Baseline assessment and after three months was done using clinical, functional and ultrasonographic evaluation.

Methods: Our study included 60 patients with RCT diagnosed both clinically and by MSUS. Patients were divided into two groups (I, II); group I included 30 patients who received a Supervised Rehabilitation Program and group II included 30 patients who received PRP injection. Patients in both groups were assessed clinically, functionally [(VAS), (WORC) and (SPADI)] and sonographically at baseline and after 3 months. Rehabilitation Program included: hot packs, (TENS), and (therapeutic ultrasound). The Exercise Programs (supervised and home-based) were applied, including: (ROM, stretching and strengthening exercises of the rotator cuff and scapular muscles). PRP injection was prepared under complete sterile conditions by whole blood centrifugation with specific