



6th International Conference on

Physiotherapy

November 19-20, 2018 Bangkok, Thailand

Scientific Tracks & Abstracts

Day 1

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PHYSIOTHERAPY

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Vitex negundo phonophoresis: A key for pain free life in knee osteoarthritis

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Background & Aim: Osteoarthritis is a progressive disease. It is the most common form of joint disease in the world. Various invasive and noninvasive treatments are available for OA knee management. Physiotherapy along with pharmacological management can prove better outcomes in Knee pain cases. Objective of our study was to find out effectiveness of diclofenac sodium phonophoresis and Vitex negundo phonophoresis along with knee exercises in osteoarthritis.

Method: In this randomized control trial, 32 diagnosed cases of grade 2 knee osteoarthritis without any other knee pathology were divided in two groups using computer generated random numbers. First group was treated with diclofenac sodium phonophoresis along with quadriceps strengthening and active knee exercises and second group was treated with Vitex negundo oil phonophoresis along with quadriceps strengthening and active knee exercises for 2 weeks. Outcome measures such as pain (VAS score) and WOMAC score was assessed at baseline and at the end of 2 weeks.

Results: On analysis using unpaired t test showed significant difference in two groups ($p < 0.005$). Pain intensity and knee disability using MODQ score showed more improvement in group two. (i.e. Vitex negundo group).

Conclusion: Vitex negundo oil phonophoresis along with physiotherapy is more beneficial than diclofenac sodium phonophoresis in knee osteoarthritis cases.

Biography

Abhijit Narayanrao Merekar is currently working as an Associate Professor, Department of Pharmaceutics at Dr. Vithalrao Vikhe Patil Foundation's, College of Pharmacy, Ahmednagar, India. He has completed his PhD with research on antihypertensive drugs. He has published more than 29 research papers. He has also attended 17 national and state level seminar and 35 posters. He received various prestigious awards in multidisciplinary research.

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Decrease of range of motion in hip rotation in patients with unilateral low back pain

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Chronic low back pain is high prevalent and become economic burden in the modern society. The current model of pain management adapted a bio-psycho-social concept to understand the possible mechanism and generating novel intervention. Tradition anatomy of muscular skeletal system focuses on the morphology of individual muscles and joints. However, the concept of bio-psycho-social model challenges the traditional concept. The net-work concept of the bio-psychosocial system provides the possibility of interaction among systems. The concept of biotensegrity connecting by fascia network provides a paradigm shift in viewing the human body. We thus hypothesises that patients with chronic unilateral low back pain, with possible imbalance tension in the myofascial network of the low back will result in asymmetrical movement of adjacent hip joint in three dimension, particularly in rotation. The purpose of this investigation is to compare the hip rotation in patients with unilateral low back pain and asymptomatic control. 19 patients with unilateral low back pain and 24 asymptomatic participants were recruited. The exclusion criteria are leg length discrepancy and scoliosis. The hip rotation was measured in prone position with the knee in flexion position for both legs. The repetitive ANOVA (group*side*rotation) was run. The result showed interaction between side and rotation. The left side has significantly less internal rotation. The significant group effect showed the patient has significantly less rotation in internal and external of both legs. For both patients and asymptomatic participants, left internal rotation is more limited than the right side. The results indicated that the limitation of the hip rotation in both internal and external direction in both legs in patients with unilateral low back pain and support the net-work concept of muscular skeletal system, while pain in the low back related to adjacent hip joints in rotation bilaterally.

Biography

Shwufen Wang has completed his PhD from Medical College of Virginia, Virginia Commonwealth University. She is currently the Professor in School of Physical Therapy, National Taiwan University. Her research interest is on pain mechanism and pain management of chronic spinal pain in relation to core muscle stability and spinal integrity.

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The effects of upper extremities massage on information processing speed and anticipatory skills in female overhead athletes

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Background: Neurocognitive system has a crucial role in planning physical behavior and coordination, sports performance. Neurocognitive tasks such as measuring the reaction time and anticipation skills have been used in various studies. Therefore, in every sport and activity that the athlete needs accurate and rapid action used to make decision, boosting anticipation skills and reaction time can be effective in the improvement of motor control and central information processing. In addition, according to the effects of massage on the neurocognitive functions the effects of massage on reaction time and anticipation skills were studied.

Method: 30 women athletes participated in this study. According to the selection criteria, the participants were randomly divided to 2 experimental and control groups of fifteen members with the experimental group being given a massage. The participants' reaction time of auditory choice, complex choice reaction times and visual choice, complex choice and high and low speed anticipation were checked with speed anticipation reaction computer tests.

Findings: This study showed that there were significant differences between two groups in the mean difference of auditory choice reaction times and visual choice, complex choice reaction times and high and low speed anticipation ($p < 0.05$). No significant differences between two the groups in auditory complex choice reaction times were observed ($P > 0.05$).

Conclusion: The massage therapy program used in this study helped the experimental group athletes have better and shorter time reaction compared to the control group. This study showed that applying massage techniques has positive effects on boosting and more proper function of cognitive nervous system. The above mentioned techniques can be used as valuable tools in physiotherapy in order to foster athletes' physical functions.

Biography

Mohammadreza Kasnavi has completed his MSc in Physical Therapy from Shahid Beheshti University of Tehran, Iran.

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Efficacy of special rehabilitation treatment in patients with Low Back Pain (LBP)

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Statement of the Problem: Many of the causes of back pain disease can be anatomically localized and described using modern imaging methods. One of the most common diagnostic is LBP. It is one of the most frequent conditions we deal with in our rehabilitation clinic. The main goal of our treatment is relief the pain of the patient and set them to the best momentary body posture. We achieve these goals by our special rehabilitation treatment and exercises called The INFINITY method® (IM). IM uses active movement and passive therapy. The three-dimensional rehabilitation therapy and movements stabilize and centralize the posture, this also helps patients with LBP. The IM is used as a treatment for patients with LBP and also as a preventive exercise program. Our purpose was to test the efficacy of the rehabilitation method IM in patients with LBP.

Methodology & Theoretical Orientation: The quasi-experimental and non-randomized study was designed for repeated measurement in our rehabilitation clinic. The study was approved by our ethical committee. All participants were volunteers and for the study of 20 patients the data was obtained from measurements on the DIERS (DIERS International GmbH, Schlangenbad Germany) which ran from January 2018 to April 2018, also within a 4-week stay. The patients with LBP (n=20, age 57.2±17.4 yrs.) all received a 60-minute IM therapy per day for twenty days over a four-week period. We measured differences in Sagittal imbalance (VP-DM) (mm), Coronal imbalance (VP-DM) (mm), Kyphotic angle (ICT-ITL) (°), Lordotic angle (ITL-ILS) (°) by DIERS 4D. Average analysis before and after the rehabilitation treatment. Another dependent variable, the Visual Analog Scale (VAS) of low back subjective pain scores was measured before and after the therapy. Data was analyzed using a Paired T-test and Wilcoxon signed-ranks test, P < .05.

Findings: The study shows that the greatest improvement occurred in patients at the coronal imbalance. Improvements occurred in 17 out of 20 patients. The same success has been achieved at the VAS score. 16 out of the 20 patients showed improvement at the Kyphotic angle. Distance of the 13 patients were decreased at the sagittal imbalance. The size of the Lordotic angle was positively changed for 12 of the patients.

Conclusion & Significance: The Results of the study show the efficacy of IM. The main impact of the study was the decreased VAS of low back subjective pain scores for the majority of the patients.

Biography

Michaela Tomanová is the Director and the Senior Consultant of the Rehabilitation Clinic in Brandys nad Orlicí in the Czech Republic. She invented the unique rehabilitation technique called INFINITY method® (IM), which is based on biomechanics, neurophysiology and anatomy. She introduced her method to the students at various Czech universities (Charles University, Czech Technical University in Prague) through lectures. She also organizes courses for the public and for the doctors and physiotherapists working in rehabilitation.

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The effects of high-intensity interval training on athletic performance measures: a systematic review**Shailendra Mehta**

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Background: The potency of act of an athletic depends on number of features, which includes procedure, power, patience, stamina, etc. There are a number of procedures of guidance which is developed to optimize strength of an athletic. A most popular method is High Intensity Interval Training which is considered as a successful procedure in improving various variables of physiology.

Objective: To understand various outcomes of High Intensity Interval Training in improving strength of athletics.

Method: Literature review which is indexed in the various databases viz SportsDiscus, Medline, PubMed and CINAHL was performed by which research gap has been identified. Quality of Research Methodology of the studies is degreed by systematically using the PEDro scale.

Results: Twenty Five studies comes under the population criteria, all such studies have been included in this research. The scores based on the PEDro scale were found 15/20–17/20. The results of High Intensity Interval Training found improvements in running: 5000 and 5500 m track time (TT), ($p = 0.03$, $p < 0.05$, respectively) and 40-m sprint TT ($p = 0.091$), rowing: 3000-m TT ($p = 0.02$), cycling increase in 5 mile time trial ($p = 0.04$), softball significant increase in peak pitch velocity (3%), and hockey skating 33 m sprint ($p = 0.03$). High Intensity Interval Training was not significant for swimming endurance trials ($p = 0.82$). Although High Intensity Interval Training had noteworthy impact on many other methods, although, its impact was varying and could not improve every time in other sports activities.

Biography

Shailendra Mehta, Principal, Department of Physiotherapy, JRN Rajasthan Vidyapeeth, Udaipur, India. He is PhD (running), MPT, PGDCBR, PGYED, CLT. He has founded SHECR and Social Welfare Foundation and has trained broad horizon of lymphedema management to 1000 physiotherapists and students. He has presented 32 research papers and published 30 articles. He has authored a book entitled "Management of Lymphedema" -and had developed a new Technique for the management of lymphedema. He has been awarded with 15 prestigious awards. He is editor in chief of International Journal of Physiotherapy and Cancer Rehabilitation. Areas of specializations- Cancer Rehabilitation, Lymphedema Management, etc.

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