



5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Posters

Novel Physiotherapies 2018

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

GNE myopathy: Recognizing key features to optimize physical therapy treatment in a rare myopathy

Jenna Desimone and Stephen Fischer

RUSK Rehabilitation - NYU Langone Health, USA

Background & Purpose: GNE myopathy, a rare autosomal recessive adult-onset disorder with progressive muscle atrophy and weakness, is due to a missing GNE/MNK enzyme, causing a sialic acid deficiency. Progressive distal limb weakness with a unique quadriceps sparing presentation is common. Investigational drug trials exist, but the disease currently has no cure. GNE myopathy has often been misdiagnosed, due to large exclusions in the population when histopathologic diagnostic criteria required multiple findings on muscle biopsy. Today the diagnosis relies on clinical presentation, including muscle imaging and is confirmed by genetic studies. GNE myopathy presents with unique patterns of muscle dominance-quadriceps vs. hamstrings, abductors vs. adductors, hip extensors vs. hip flexors, plantar flexors vs. dorsiflexors, biceps vs. triceps-with subjective reports of tripping, difficulty in managing steps and rising from chairs. The authors have partook in data collection for a GNE myopathy IRB approved drug trial for four years, and are now seeing this population in the clinic. There is no literature available on GNE myopathy and physical therapy at this time. This report will identify the clinical characteristics of GNE myopathy and highlight the role of physical therapy (PT) in improving physical function, decreasing falls risk, and improving quality of life in this patient (pt) population.

Case Description: Pt is a 42 year old female, noted a six year progressive decline in distal BLE weakness with increased falls. She was referred to PT for strengthening, balance and gait training and to transition from soft over the counter ankle foot orthosis (AFOs) to custom AFOs. She was not enrolled in a drug trial. Pt presented on evaluation with impaired strength, balance, endurance, and increased fear of falls. Pt received 30-60 min individual PT sessions 1-2 times per week for 32 sessions. Treatment emphasized strengthening dominant muscle groups to optimize function, balance training, and progressing high level mobility with appropriate AFOs.

Outcomes: First and final outcome measures: 5 time sit to stand was 9 sec to 6 sec, timed up and go 7.8 sec to 6.6 sec, gait speed (GS) self-selected 1.21 m/s to 1.49 m/s, GS fast 1.56 m/s to 1.79 m/s, mini-bestest 20/28 to 27/28, and Hi-MAT 27/54 to 29/54. Fall rate from x1 weekly to x1 in 3 months.

Discussion: Knowledge of GNE myopathy presentation and prognosis enabled PT to develop targeted strengthening programs to improve functional strength, decrease risk of falls, and improve quality of life. Focused strengthening of dominant muscles in moderate intensity to prevent fatigue is essential in a population with difficulty generating new muscle fibers. Education on appropriate bracing to decrease falls risk and improve high level mobility added to pt quality of life. More research is warranted as treatment options for patients with GNE myopathy progress.

Recent Publications

1. Brady S, Squier W and Hilton-Jones D (2013) Clinical assessment determines the diagnosis of inclusion body myositis independently of pathological features. *Journal of Neurology, Neurosurgery and Psychiatry* 84(11):1240-1246.
2. Haghigi A, Nafissi S, Qurashi A et al. (2016) Genetics of GNE myopathy in the non-Jewish Persian population. *European Journal of Human Genetics* 24(2):243-51.
3. Kazamel M I, Sorenson E J and Milone M (2016) Clinical and Electrophysiological Findings in Hereditary Inclusion Body Myopathy Compared With Sporadic Inclusion Body Myositis. *Journal of Clinical Neuromuscular Disease* 17(4):190-6.
4. Monies D, Alhindi H N, Almuhaizea M A et al. (2016) A first-line diagnostic assay for limb-girdle muscular dystrophy and other myopathies. *Human Genomics* 10(1):32.
5. Urtizberea J A and Behin A (2105) GNE Myopathy. *Med Sci (Paris)* doi:10.1051/medsci/201531s306.

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Biography

Jenna DeSimone, a specialist in neurological recovery, is a board certified Neurological Clinical Specialist and a Senior Staff Physical Therapist at NYU Langone Health. A graduate of Villanova University (B.S.), Jenna received her Doctorate in Physical Therapy from Sacred Heart University in 2012 and joined NYU Langone Health the same year. After spending three years rotating through inpatient care, acute rehab, and outpatient care, she began her specialization in community-based rehab in the neurological spectrum of care. She has since risen to the senior level as a non-rotating member of the Neurological Outpatient Department and is a certified clinical instructor, serving as a lead instructor for III-IV year physical therapy students. Jenna has presented case studies on CIDP and GNE Myopathy on the national level, most recently at the American Physical Therapy Association's Combined Sections Meeting in San Antonio, Texas (2017) and in New Orleans, Louisiana (2018)

jenna.desimone@nyumc.org

Notes:

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Physiotherapy hand glove

Mohamed alamin

Biomedical Engineer, Sudan University, Sudan

This project aims to design a wearable, flexible physiotherapy hand glove. Because the hardness facing the physiotherapist to diagnosis the problems in the hand muscles, and monitoring, evaluating the treatment process. So the needed to make the device that wearable, portable to measure the force of fingers increase. This device consist of five force sensors (FSR 402) that is resistive sensor the resistor decrease with the force to measure the press force of finger, microcontroller (atmrga8) to process signal from sensor and calculate the force for every finger, LCD display to display the result from microcontroller and power supply unit to supply all components in circuit, all components sewed and connected in glove using conductive thread to fabricated the circuit to make the circuit flexible and wearable. Determine the normal ranges and abnormal ranges to any individual finger by measuring the force of fingers to thirty normal people, to measure the grip force calculate the average of force for five fingers, after completing the design experiment in physiotherapy clinic for ten abnormal people during four sections. The design is comfortable for long term wear, portable, low power consumption, easy to use, low cost

Biography

Mohamed alamin a medical engineer who studied at the University of Sudan. for science and technology. Since the period of university I am interested in the field of physiotherapy and my research graduate in this field. I am now working with TMA company for medical services as sales and service manager, I have many of the ideas that I intend to turn to research and that for the service of humanity.

alhameem733@gmail.com

Notes:

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Prevention of rheumatic diseases: physical treatment, prevention, basic knowledge, classification

Visar Tifeku

Physical Therapy Center, Kosovo

Introduction: Rheumatic diseases have been known since ancient times and are presumed to be as old as mankind, are very widespread and often chronic. Rheumatic diseases are classified into:

- Inflammatory rheumatism - rheumatoid arthritis (AR), rheumatic fever etc.
- Degenerative rheumatism - arthrosis of peripheral nodes and spinal cord.
- Extraarticular-periarticular rheumatism (about nodule) - bursitis, tendinitis, fasciitis.

Definition: AR is a chronic illness of unknown cause, which involves many organic human systems. The characteristic of RA is the persistent sinovitis, which most often involves nodes peripheral (symmetrically). Inflammation causes stump destruction and erosion bone, which is also the main feature of the disease. The course of the disease is very variable: the sick may have light forms of oligoarthritis or severe progressive polyarthritis with major injuries. Epidemiology. Of AR suffer 1-3% of the population, while women are more affected than men.

Biography

Visar Tifeku was born on December 8, 1993 in Kacanik. Attends primary school "Ali Asllani" in Doganaj of Kacanik from 2000 to 2009. After finishing primary school, the Pharmacy Branch in "Elena Gjika" - Ferizaj / Urosevac continues in the secondary school of medicine in 2013. This year started Senior studies at the Faculty of Medicine, Physiotherapy course. Has good German language skills and average English language skills

visar.tifeku@msn.com

Notes:

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

An exploratory study of patients' and physiotherapists' preferences when making decisions and sharing information about managing low back pain in Saudi Arabia

Wafa AlKhatrawi, Iain D Beith and Sheila Kitchen

¹Ministry of Health, Madinah, Saudi Arabia

²King's College London, UK

³Kingston and St. George's Faculty of Health, Social Care and Education, UK

Statement of the Problem: Involving patients in making decisions about the management of health conditions enables clinicians (including physiotherapists) and patients to deliberate about options and share information about the clinical situation; this may help to improve patients' adherence and self-control over their illnesses. Low back pain (LBP) is a common and debilitating problem often managed by physiotherapists. The preferences of these patients and physiotherapists for involvement in decision making and, more specifically, those of patients and physiotherapists in Arabian cultures such as Saudi Arabia is largely unknown. The purpose of this study is to explore the perceptions and preferences of physiotherapists and patients with LBP for patient involvement in decision making and information provision.

Methodology & Theoretical Orientation: A cross-sectional study was conducted, in Saudi Arabia, with patients with LBP (n=296) and physiotherapists (n=93) using self-completion questionnaires developed for this study. Chi-square tests in addition to ordinal logistic regression modelling were conducted to identify associations and differences within groups of participants.

Findings: Most patients preferred to adopt a more passive role in decision making within the clinical setting, but wished to share decisions about aspects occurring elsewhere (e.g., routine daily activities and home management programs). Patients' demographic and LBP characteristics were generally significantly associated with their preferences (p<0.001-0.05). Physiotherapists were generally paternalistic in their approach to decision making.

Conclusion & Significance: These findings provide information on which to base future studies to investigate the possible effect of preferences on treatment outcomes and the long term 'self-management' of LBP.

Table: Percentages of Patients' & Physiotherapists' Preferences Regarding What Should Be Done To Decide

CONDITION	Total Number of PT	Total Number of PE	Patients (n=296)			The physiotherapists (n=93)		The Physiotherapists of other				
			PT	PE	PE	PT	PE	PT	PE			
Deciding/relating routine daily activities	235	91	13	6.6	9	7.7	26	28.5	24	27.8	15	1.2
Readiness to carry out routine daily activities	235	91	14	6.5	15	8.8	31	34.3	15	16.2	17	1.8
Type of treatment	231	91	2	0.8	8	3	23	25	32	35.8	45	50.6
Doing home management program	231	91	5	2.2	8	3.8	30	33.3	34	38	34	35.2
Visit frequency	231	91	3	1.3	3	1.2	30	33.3	29	32.8	36	37.8
Amount of expenditure	235	91	4	1.7	4	1.4	27	29.1	33	35.8	38	40.2
Consulting more senior physiotherapist	231	91	11	4.2	17	6	24	26.1	25	27.8	34	36.8
Referring back to treating physician	235	91	19	7.7	25	8.2	25	27.8	25	27.8	37	39.2
Discharged from physiotherapy services	231	91	7	2.8	5	1.8	32	35.8	23	25.8	36	38.2

PT: Patients with LBP, PE: Physiotherapists

Biography

Wafa AlKhatrawi has her expertise in Physiotherapy for more than twenty years, in Saudi Arabia. She graduated in 1996 as a certified professional Physiotherapist (King Saud University, Riyadh), and then completed her Master's degree in Pediatric Physiotherapy, in 2004. She then finished her PhD at King's College London, London, United Kingdom (2013) with an interest in collaborative clinical decision making and patient centered care.

wafmalik@yahoo.com



5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Accepted Abstracts

Novel Physiotherapies 2018

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Effectiveness of transcutaneous electrical nerve stimulation in management of neuropathic pain in patients with post traumatic incomplete spinal cord injuries, at paraplegic center, peshawar, pakistan

Amir Zeb

Paraplegic Center, Pakistan

Introduction: Neuropathic pain is a common secondary complication following spinal cord injury and is associated with incredible human sufferings and financial costs. The objective of this study was to determine the effectiveness of transcutaneous electrical nerve stimulation (TENS) in management of neuropathic pain in patients with post traumatic incomplete spinal cord injuries.

Methods: A Quasi-experimental study was conducted at Paraplegic Centre, Peshawar. 60 incomplete spinal cord injured patients from both genders having age 18 to 70 years were recruited for the study. Patients with associated traumatic brain injury or any other major complication were excluded from the study. TENS was used with high frequency of 80 HZ. Time for one session was 45 minutes, while there were two sessions per day i.e. morning and evening session. TENS was applied for four consecutive days i.e. Monday, Tuesday, Wednesday, and Thursday. Each and every patient who participated in the study was followed for eight weeks. Pain intensity was measured by using VAS (Visual analogue scale) before and after the application of TENS. The data were analyzed using SPSS version 20.

Results: A total of 60 subjects with mean age 52.64 ± 0.48 (ranged from 20-60 years) participated in the study. There were 25% female subjects while remaining 75% subjects were male. The mean decrease in the pain intensity was seen through the array of intervention in consecutive weeks of follow up. At base line week one, the mean pain score was 6.45 which were decreased to 4.77 post intervention at day one and 3.48 at day four respectively. The similar trend was observed in each follow up weeks, on first day of week eight the mean pain score was 3.78, which further decreased in regular fashion and reached to 1.94 ± 1.67 at the end of day four of week eight. Difference in mean pain score was recorded in each session of transcutaneous electrical nerve stimulation. During the consecutive therapy sessions with TENS, the pain intensity decreases in a linear fashion and there are significant difference ($p < 0.05$) between pre and post treatment sessions.

Conclusion: TENS is a useful and safe adjuvant therapy in patients with spinal cord injuries. Fluctuation at each new day was reported in the present study, but as a whole TENS in patients with post-traumatic incomplete spinal cord injuries is an effective tool in the management of neuropathic pain. Consistent and long term therapy/rehabilitation with TENS in patients with post-traumatic incomplete spinal cord injuries is recommended.

amir_zeb45@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Effect of vacuum massage therapy on the post-burn scar: single blind randomized controlled study

Mahmoud Elshazly¹ and Ahmed Mahmoud Kadry²¹South Valley University, Egypt²Kafr El-Sheikh university, Egypt

Statement of the Problem: Post burn scar is a chronic, debilitating problem that is frequently has negative effect on the patient function and psychology. Scars consist of excessive dense fibrous tissue growing in all directions and elevated above the level of skin. The purpose of this study was conducted to investigate the effect vacuum therapy on the post burn scar.

Methodology & Theoretical Orientation: 48 adult patients suffered from lower limb post-burn hypertrophic scar randomly assigned into either control or study group. Control group received 20 minutes session of friction massage on the scar area for 10 minutes and stretching of the lower limb muscles for 10 minutes. Study group received vacuum treatment on the scar in a session of 10 minutes. Sessions in both groups repeated three times per week for four weeks. The main outcome measure was the ultra-sonographic assessment of scar thickness.

Findings: Results of scar thickness for 48 patients were analyzed after four weeks showed significant within groups' improvement with 19.1% and 34.9 % percentage of improvement in control and study group respectively with no significant difference between both groups.

Conclusion & Significance: Vacuum therapy was an effective modality for treatment of the post burn scar but not superior to traditional physical therapy program, in form of friction massage and stretching.

Mahmoud_elshazly311@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

The association between cardiorespiratory fitness, and physical activity levels of central obese adults in Enugu state (eastern part), nigeria

Iwezu Happy Nonso

University of Nigeria Nsukka, Nigeria

Central obesity and its implicated adverse health conditions are a major concern of some people. Central obesity is one of the predisposition factors to cardiovascular disease, respiratory conditions, type 2 diabetes mellitus, cancer and others. The purpose of this study was to determine the relationship between central obesity, cardio respiratory fitness and physical activity level among adults in Enugu State. Three hundred and seventeen subjects (158 obese and 159 non obese) who met the inclusion criteria and gave their informed consent participated in the study. Their waist to hip ratio was determined using measuring tape. Body mass index is measured with stadiometer and weighing scale. Cardio respiratory fitness was determined using Harvard step test and international physical activity questionnaire (IPAQ) was used to determine their physical activity level. Data collected was analyzed descriptively and inferentially using correlation test. The level of significance was set at $p = 0.01$. The physical activity level of obese adults in Enugu state increases in an ascending order of vigorous, low, moderate while the cardiorespiratory fitness decreases in reverse direction as low, average, good, excellence and very low. There was a significant relationship between cardio respiratory fitness and physical activity ($r = 0.146$, $sig = 0.009$). There was also a significant relationship between waist-hip ratio and cardiorespiratory fitness ($r = -0.221$, $sig = 0.000$). In this seminar, I will discuss the effect of central obesity on cardio-respiratory fitness, and physical activity on adults and its pathophysiology.

iwezuhappy@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Shock wave therapy effectiveness in treating patients with heel pain: a randomized control trial

Eman Matar

Ministry of Health, Kingdom of Bahrain

Introduction: Shockwave therapy is increasingly used for plantar fasciitis, but limited evidence supports its use. In spite of plantar heel pain being so common in the population, a growing body of evidence indicates that various methods and modalities applied by physiotherapists to relieve the symptoms of plantar heel pain lack quality validating research and therefore, not evidence-based. The purpose of this study is to determine the clinical effectiveness of shock wave in the treatment of chronic patient with plantar heel pain in term of pain intensity and function level, to measure any changes in pain level before and immediately after the treatment and to compare the effectiveness of shock wave therapy with other regular modalities in physiotherapy.

Methods: Randomized controlled trial (RCT) with 90 patients with plantar heel pain was selected from the general public in the same order that they presented in the Physiotherapy Department at Ahmed Ali Kanoo Health Center. Patients were randomly assigned into three groups: Group A - shockwave therapy group - using Piezoston 100 at each session, 2000 shots (0.12-.051 mJ/mm², 50Hz) of shock waves and exercise. Group B - conservative treatment group includes wax therapy and exercise. Group C - routine care with exercise only. The foot and ankle ability measure (FAAM) were used to measure function and the visual analogue scale (VAS) to measure the pain intensity.

Results: Pain intensity data group A (shock wave and exercise) was no immediate reduction. The mean value of pain intensity was calculated as 7/10 pre intervention. The mean value of pain intensity was calculated as 3.3/10 post intervention. Pain intensity data for group B (Wax & Exercise) was no change in pain within the same session. The mean value of pain intensity was calculated as 6.5/10 pre intervention. The mean value of pain intensity was calculated as 5.2/10 post intervention. Pain intensity data for group C (exercise only) was an immediate reduction, but not lasting for next session. The mean value of pain intensity was calculated as 6.3/10 pre intervention. The mean value of pain intensity was calculated as 4.2/10 post intervention. Function has been improved by 80% with group A, 65% with group B and 33% with group C.

Discussion: The study demonstrated the clinical and statistical efficacy of shock wave therapy in the treatment of chronic patients with plantar heel pain in term of pain and function. In comparison to other physiotherapy modalities, shock wave therapy has been proven its effectiveness with other regular modalities in physiotherapy.

eman_matar@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Evidence based physiotherapy treatment for ankylosis spondylitis

Erika Cyrus Barker

Head of Physical Therapy department, University of Santa paula, Costa Rica

Patients with ankylosing spondylitis, have an increased risk of functional limitation if adequate treatment of all functional alterations is not performed. Pain is not the only symptom to be treated in patients with this condition, there are functional alterations characteristic of the disease, as well as alterations of the environment and the role of life that directly influence the well-being and functionability of patients. The main alterations presented by ankylosing spondylitis are pain and stiffness caused by inflammation of the sacroiliac joints, which progressively extends to the other joints of the spine, producing numerous changes in the patient's posture physiotherapy treatment in ankylosing spondylitis plays a very important role both in the prevention of the evolutionary process of the disease and in the treatment of the disease once the symptoms have appeared. Thus, one of the tools that the physiotherapist has for the treatment of as in the long term is the therapeutic exercise. A study by Viitanen et al. provides a very important data for our investigation, the results showed that the duration of the disease does not affect the results; or in other words, that the effects of physical exercise on these patients are independent of the progress of the disease, or of the stage of the pathology in which the patient is found, so that age would not be an inconvenience for the inclusion of these patients in a physical exercise program. It should be noted that all the exercises of the program must be related to the alterations that patients of ankylosing spondylitis suffer as a result of it. Not all exercises are beneficial for this affection. The present bibliographic review is accompanied by a proposal based on a series of case studies, the results of which have allowed patients in this condition to maintain an active life with minimal limitations in function.

ecyrus@uspsantapaula.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Prescription of exercise in older adults, physiotherapeutic approach

Erika Cyrus Barker

Chair Director of Physical Therapy Program, Santa Paula University

How to correctly prescribe exercise to elderly population? The definition states that, from a functional perspective, a healthy old person is one who is capable of facing the process of change with an adequate level of functional adaptability and personal satisfaction. With advanced age the older adult can reach a state of vulnerability, fragility, which predates and predisposes the individual to disability and functional dependence, hospitalization and death. The fragility phenotype described by Fried et al. 2001, mentioned by Gine'-Garriga et al. identifies a fragile individual when three or more of the following criteria are present; Unintentional weight loss, muscle weakness, fatigue or low resistance to small effort, slow gait, low level of physical activity. It constitutes a fundamental decision of the prescription phase of any neuromuscular training program aimed at improving or maintaining health. In addition, the correct analysis or multivariate integration of the exercise selection will allow the identification and progression of the same ones whose motor characteristics are common or very similar, and therefore constitute exercises similar and interchangeable with each other to cover the same objectives from the point of view of health and functionality. It is important for the physical therapist to know the essential assessments before exercise prescription in older adults and also the essential goals in the prescription of exercise in the older adult.

ecyrus@uspsantapaula.com

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Effects of levels of supervision during a standardised post-surgical rehabilitation programme influence PROMs assessing function

Haider Darain^{1,2}¹Khyber Medical University, Pakistan²Queen Margaret University, UK

There is no consensus in the literature about the effects of supervision from physiotherapists on the outcomes of rehabilitation programme following anterior cruciate ligament (ACL) reconstruction. This clinical trial was designed to compare the outcomes of the fully-supervised and the minimally-supervised rehabilitation programme following ACL reconstruction. For this purpose, a total of 48 patients who consented for this clinical trial were randomly allocated into the fully-supervised (n=24) and the minimally-supervised (n=24) conditioning programs. The patients in the fully-supervised conditioning programme received contemporary rehabilitation in the hospital where they were fully monitored by the physiotherapists during the whole session of physiotherapy. The patients in the minimally-supervised conditioning programme followed a novel approach to the rehabilitation and self-managed rehabilitation activities in the hospital without supervision from the physiotherapists. In the latter approach information about the rehabilitation activities that were to be undertaken by patients were provided to each patient in the minimally-supervised rehabilitation group at the beginning of each physiotherapy session by a physiotherapist. From an ethical prospective, the patients in the minimally-supervised rehabilitation programme were guided to the same rehabilitation programme received by the patients in the fully-supervised rehabilitation program. The number of physiotherapy sessions in the hospital is attended by the patients in the fully - supervised and the patients in the minimally-supervised rehabilitation groups were observed 14.3 ± 4.9 (mean \pm SD) and 14.5 ± 4.3 , respectively; $p = 0.1$, indicating that the patients in both the latter groups have attended similar number of physiotherapy sessions in the hospital. All the patients were assessed before surgery on 6th, 12th and 24th week post-surgery on patients reported outcome measures (PROMs) (IKDC, KOOS, K-SES, Lysholm and VAS). Findings of this trial suggested, a statistically significant group \times time interaction for subsections physical activities of the K-SES ($F(3.0, 114) = 2.6, p = 0.02$). No differences were observed for the remaining three subsections of the K-SES, all five subsections of the KOOS, IKDC, Lysholm and VAS, suggesting that the patients in minimally-supervised rehabilitation group can achieve the same levels of function to the patients in the fully-supervised rehabilitation groups. Based on the findings of this trial, it can be concluded that the outcomes of the rehabilitation following ACL reconstruction may not be influenced by the levels of supervision from the rehabilitation team.

haider.kmu@hotmail.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Running rehabilitation, technique and performance: a practical application

Hannah Wilkinson^{1,2,3}¹University of Teesside, UK²University of South Wales, UK³Valaint Clinic, UAE

A presentation to explore the most up to date research related to running rehabilitation and technique. This presentation explores what we currently know about running injuries, current rehabilitation and the relatively new thinking of technique management in the prevention and rehabilitation. Exploration around foot strike, cadence and adaption of technique in relation to presenting injury will be explored all in line with current evidence base from sources such as *The British Journal of Sports Medicine*, *PubMed*, *Journal of Science and Medicine in Sport*. Many physiotherapists in musculoskeletal outpatient setting do not look at running style/technique as part of their assessment. Within this presentation we will look at simple ways to assess running technique and affordable technology to facilitate our assessment. While applying what the current evidence base says in relation to clinical practice. Practical examples will be given from clinical practice here in Dubai, using a variety of videos and still frames analyzed to show objective outcomes. Content exploring chronic on acute workloads will also feature as this can be an essential component when deciphering causation of injury and/or return to running. The presentation aims to give delegates ideas and principles that can be applied safely and easily within the clinical setting, while being based on latest evidence in the field of sports medicine in relation to running rehabilitation.

haider.kmu@hotmail.com

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Bone mineral density difference among reproductive women versus post-menopausal women of lahore, pakistan

Muhammad Jamil Sabit, Rida Jamil Sabit, S H M Asad Siddiq and Umer Maqsood
Al Razi HealthCare, , Pakistan

Background: In Pakistan, approximately 9.9 million people suffer from Osteoporosis, out of which 7.2 million are women alone. It has been established that low bone mineral density (BMD) accounts for Osteoporosis. This trend is mostly seen in the women of postmenopausal age.

Objective: The purpose of this study is to evaluate and compare the differences in BMD between reproductive and post-menopausal women from Lahore district.

Rationale: The rationale of the study is to find out whether there is any significant difference in the BMD among reproductive and post-menopausal women in the population of Lahore, Pakistan as in western societies these variations are minimized with awareness programs about role of exercise, proper diet and supplements. This would be the first step in Pakistan and can be helpful in further studies to assess the other influencing factors. Inclusion criteria includes the study was conducted on women with complaint of generalized aches and pain after the three-month course of NSAID in reproductive age group and postmenopausal women after age 51. Exclusion criteria includes women who are pregnant; who had any recent gastrointestinal contrast studies; bilateral hip replacements or bilateral hip pins or screws would prevent the hip sites from being scanned and; metallic rods or spinal fusion devices in the lumbar spine prevent scanning.

Materials & Methods: A cross sectional survey was performed on 196 women of whom 98 were reproductive and 98 postmenopausal. Convenient sampling was employed using the bone density scan questionnaire and DEXA scan. Using the information gained from these two, T scores were calculated. The population under study consisted mainly of the females visiting outpatient Department of Pain Center Mayo Hospital, Lahore, Al- Noor Diagnostic Center and Punjab Medical Center. Further, the data was researched and analyzed using SPSS. The mean and standard deviations of T-score values at lumbar spine and hip were extrapolated to reproductive and post-menopausal women and used to assess the differences in their BMD. According to WHO, the normal value of T- score is -1.0 SD, the value for osteopenia is T-score between -1.0 and -2.5 SD and the value for osteoporosis is T- score of -2.5 SD or below.

Result: The mean age of reproductive women was 41.00 ± 9.69 (50%) and postmenopausal women 62.30 ± 6.37 (50%). The aim of the study was to evaluate the BMD difference among these two groups of women. The T- score at lumbar spine shows the P value of 0.01, which means that we can safely come to a conclusion that there is a significant amount of difference in BMD between the groups of reproductive and postmenopausal women. However, the T-score at hip shows a P value of 0.08, which means that there is no essential difference in BMD between reproductive and post-menopausal women.

Conclusion: This concludes that there is no doubt a profound difference of BMD between reproductive and post-menopausal women, based on the p value of 0.05. To emphasize, the average T-score for lumbar spine in reproductive and post-menopausal women is 0.01 and it reinforces the contrast of BMD in this group. On the other hand, the T- score for hip bone in reproductive and post-menopausal women is 0.08 which further reasons the non-difference in BMD.

painspecialistpk@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Comparison of subtalar mobilization with conventional treatment for the management of planter fasciitis

Muhammad Kashif

Riphah International University, Pakistan

Background: Plantar heel pain is generally declared as plantar fasciitis; the pain in the plantar side of the foot in heel area. The main aim of this study is to determine the effectiveness of subtalar mobilization with mulligan technique and conventional treatment for the management of planter fasciitis

Methodology: A randomized trial of three weeks duration was conducted at Prime Care Hospital, Faisalabad after the approval of synopsis. Purposive sampling technique was used to enroll the patients. A pre-defined inclusion and exclusion criteria was used to screen 60 participants. Patients were randomly divided into A & B groups. In group-A subjects were treated with subtalar mobilization with mulligan technique and in group-B subjects were treated with convention physiotherapy treatment including a session of therapeutic ultrasound for 10 minutes. Patients in both the groups received rigid tapping as standard treatment. Foot and ankle disability index and intensity of heel pain with visual analogue scale measured outcomes in term of frequency and duration of planter fasciitis. Patient's data was recorded pre-treatment and post-treatment. Pre-treatment measurement was compared with post-treatment measurements after 4th, 6th and 8th Sessions

Results: The study revealed that the mean reduction in conventional physical therapy group was 3.03 compared to 2.68 in subtalar mobilization, which was clinically more significant in conventional physical therapy group. The mean improvement in conventional physical therapy group was 34.59 compared to 36.92 in subtalar mobilization, which was clinically more significant in subtalar mobilization group. Although both groups appeared to be effective but there was no significant difference in pain and disability across each group with p value < 0.05.

Conclusion: It is concluded that both treatment regimens are effective in management of planter fasciitis in terms of reduction in pain and disability. However this study failed to establish the superiority of one technique over the other.

kashif.shaffi@gmail.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Physiological and physical implications of poor breathing patterns on the musculoskeletal system

Tania Clifton-Smith

BradCliff Breathing Partner, Breathing Works, New Zealand

This case-based presentation explores the recent interest in the relationship between correct breathing and a number of physiological variables important to physiotherapy practice. Until recently, physiotherapists had not drawn the link between breathing and posture, spinal stabilization, cardiovascular and lymphatic flow and abdominal and bowel movement, but recent research suggests that breathing plays an integral part in normalizing these physiological functions. Three case studies will be used to illustrate some of the diverse potential of incorporating breathing-based rehabilitation into treatment programs for patients with poor spinal health and upper limb non-injury based dysfunction. Data drawn from these cases will show how correct breathing can improve spinal stabilization, reduce pain and improve functional movement. Alter accessory respiratory muscle dominant motor patterns that perpetuate upper limb, neck and shoulder dysfunction.

breathe@ihug.co.nz

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Comparing the effects of modified constraint-induced movement therapy and intensive conventional therapy on upper-limb motor function recovery after botulinum-a toxin injection in stroke

M.Nasb

Department of Rehabilitation Medicine and physical therapy, Tongji Hospital, Huazhong University of Science and Technology, Wuhan, PR China

Background: Stroke is not only the second leading cause of mortality around the globe, but also one of the main causes of adult disability. Many studies have suggested that the combination technique therapies showed better outcomes compared with single approach. Botulinum-A toxin injection combined with other rehabilitation method such as modified constraint-induced movement therapy (BTX-CIMT) emerged as highly promising intervention for motor recovery post-stroke.

Objective: Herein we aim to investigate whether administrate a higher dose of conventional intervention combined with BTX (BTX-ICT) can emulate the effectiveness of BTX-CIMT on improving motor recovery along with reducing spasticity of upper limb in stroke patients.

Methods: Evaluator blinded randomized controlled trial conducted between February 2014 to November 2016 among 58 stroke patients aged 10 to 70 years, patients were allocated into two groups: the intensive conventional rehabilitation, and modified constraint-induced movement therapy. Both groups had their modified Ashworth scale (MAS), Fugl-Meyer (FMA) and Barthel index assessment (BI) before injection and at 4 weeks post-injection.

Results: After 4-week treatment, both groups revealed a significant improvement in MAS, FMA and BI score compared with pre-treatment score ($P < 0.05$). BTX-mCIMT group possessed a noteworthy higher mean score in FMA and BI than BTX-ICT group's at the end of 4 weeks' treatment ($P < 0.05$). However, no significant statistical difference was noticed in MAS score ($P > 0.05$).

Conclusion: Both BTX-mCIMT and BTX-ICT can facilitate motor function recovery in stroke. Compared with BTX-ICT. However, BTX-mCIMT shows better curative effects on motor function recovery and daily living ability.

Key words: Rehabilitation, physical therapy, Botulinum toxin, Constraint-induced movement therapy, Spasticity, Stroke, Upper extremity

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

The effect of exercise involvement of elastic bands on nerve conduction, functional fitness and life quality in seniors using wheelchairs

Mostafa Sarabzadeh¹ and Neda Dekamei²¹Islamic Azad University of Mashhad branch, Iran²Alzahra University, Iran

Nowadays the number of adult persons using wheelchair such as limb palsy affected by war or congenital have more gone under attention. For these people the existence of social problems and decreased communications which leads to no participation in outdoor activities and lack of ease to use weight or other resistance trainings, challenging effectiveness of elastic bands with high access and conforms to need of these special people seems to be essential affair. Accordingly, 22 subjects with wheelchair, age range of 55-70 were intentioned selected and divided into two groups of experimental groups consisted of elastic band training involvement for eight weeks, three sessions per week, 50 min per session and control group without stated involvement with simple supervision activities. Pre- and post- test included neural parameters measurement by electroneurography system, functional activities by joint motion range and flexibility tests and life quality using by Barthel ADL test were conducted. Then, data were analyzed using by dependent and independent T test with significance level of 0.05. Present findings were reported significant differences on nerve conduction ($p=0.00$) and upper flexibility test ($p=0.04$) between two groups, where these differences were transferred to life quality indicator for experimental ($p=0.00$) due to paired T test too. Based on obtained findings we can recommend elastic band training as a useful method to recovery joint motion range and neuromuscular parameters which are reflector on need of these special people with mostly arguable in main text.

m.sarab68@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Constraint-induced movement therapy combined with botulinum - a toxin injection as a novel rehabilitation approach for patients after stroke: strategy and mechanism

M Nasb

Department of Rehabilitation Medicine and physical therapy , Tongji Hospital, Huazhong University of Science and Technology, Wuhan, PR China

Stroke is considered one of the main causes of adult disability and the second most serious cause of death worldwide. Combination between Constraint-induced movement therapy (CIMT) and Botulinum toxin type A (BTX) injection emerged as a highly efficient intervention for rehabilitation patients after stroke. This is owing to their unique ability onto simultaneous improvement of motor function along with less tendency to spasticity. However, utilization of CIMT with BTX injection in rehabilitation and/or their mechanism hadn't been hitherto highlighted. This review presents a comprehensive study of this area of research including definition, mechanism, therapeutic effects and combination evidence which can consequently be a strong road-map for policy-makers, researchers, and physicians.

Keywords: Rehabilitation, Physical Therapy, Combination, CIMT, mCIMT, Spasticity, Stroke, upper extremity

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Effectiveness of manual therapy and neuromuscular training with conventional physiotherapy in knee osteoarthritis

Nimra Arshad

King Edward Medical University, Pakistan

The purpose of the current study was to characterize the effectiveness of two techniques on the outcome of knee osteoarthritis. Osteoarthritis (OA) is a universal persistent state resulting in pain, fatiguing and functional limitations. A randomized controlled trial study was conducted at Department of Physiotherapy Mayo Hospital Lahore and at some other settings related to my requirements within Lahore. I conveniently selected a sample of 58 patients and placed into two groups. The manual therapy was applied in group A and neuromuscular training in group B along with conventional physiotherapy for four weeks. The goniometry, visual analog scale (VAS) and the western ontario and mcmaster universities arthritis index (WOMAC) for knee osteoarthritis were assessment tools to assess all the patients before and after two weeks of physical therapy intervention. Data was analyzed by SPSS and statistical tests were applied at 95% level of significance. This determined the efficacy of both the treatments regimens and compared with each other. This study concluded that both the treatment techniques manual therapy and neuromuscular training were effective in managing knee osteoarthritis. However, manual therapy had more positive impact in improving pain, range of motion (ROM) and function as compared to those patients who were treated by neuromuscular training.

nimraarshad70@yahoo.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

2017 scientific research on effect of wearable posture products & foot orthotics in muscular skeletal system

Romina Ghassemi
D.C. USA

In 2017 your patient demographic's common denominator is not the flue, technology induces symptomatology, silently robbing ones health and wellness, a precursor or degenerative arthritis. Prolonged Texting, Computer use, Standing, Sitting or Driving is causing a rise in loss of time from work, increase pain, and accelerating rate of Degenerative Spinal Joint diseases. Learn the clinical presentation, evaluation, diagnosis and treatment of an unhealthy biomechanics and its impact on muscle firing. The compound effect of Gait interruption and Poor Posture in most recent sEMG studies, can impact the response of the body in the rate of muscle fatigue, balance and overall response to physical rehabilitation, biomechanics change and alter the course of daily wear and tear on the joints, discs and muscular system. A different approach to patient's care and the impact of the biomechanics Kinetic chain and its, functional expression from Feet to Head. Learn the basic steps of patient consultation, bio-mechanical examination, and incorporation of a conservative treatment plan in reducing the underlying cause of spinal symptoms and long term degenerative changes. This work shop, is designed to be informative and usable in clinical practice for Orthopaedic and Sports Physicians, Physical therapists, Podiatrists, Chiropractors, Occupational therapists, Professional Trainers. Note links are available to attending participants.

drg@bax-u.com

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Lower limb support ability of the affected leg during stepping is importance for ability relating to well-controlled walking in ambulatory patients with stroke

Sirisuda Phonthee¹, Sugalya Amatachaya¹, Arunee Chanapisit^{1,2}, Thanat Sooknuan^{1,3}, Pisit Netsan^{1,3}, Kanok Nualsutha^{1,3}, Pipatana Amatachaya^{1,3} and Lugkana Mato¹

¹Khon Kaen University, Thailand

²Siam International Physiotherapy Clinic, Thailand

³Rajamangala University of Technology Isan, Thailand

Patients with stroke likely suffer from the unilateral sensorimotor impairments that reduce their lower limb support ability (LLSA) of the affected limb. However, previous studies have assessed the LLSA in various double stance postures and have verified its association with some variables related to walking ability. This study investigated the amount and duration of the LLSA of the affected leg during stepping and their correlation to variables related to the ability of well-controlled walking in 37 ambulatory patients with stroke. Subjects were interviewed and randomly assessed for the ability related to well-controlled walking, including walking speed, dynamic balance ability, walking endurance, and symmetrical ratio during walking. An average LLSA on the affected limb during stepping of the subjects was approximately 82% of their body-weight. The LLSA, particularly the amount, was moderately correlated to the variables related to the ability of well-controlled walking in the subjects. The LLSA during stepping was obviously lower than that of healthy individuals (approximately 95% of their body-weight). The findings emphasized the importance of both the amount and duration of the LLSA during stepping for the ability related to well-controlled walking in ambulatory stroke patients.

siriphonthee@gmail.com