

DAY 1

Keynote Forum



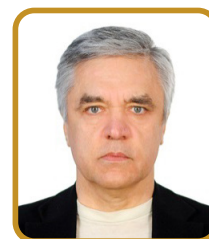
8th Edition of International Conference & Exhibition on
**PAIN MANAGEMENT, PHYSIOTHERAPY &
SPORTS MEDICINE**

&

9th Edition of International Conference on
INTERNAL MEDICINE & PATIENT CARE

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Personalized and Precision Medicine as a Unique Avenue to have the Healthcare Model Renewed to Secure the National Biosafety



Sergey Suchkov

Sechenov University, Russia

A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, personalized and precision medicine (PPM). To achieve the implementation of PPM concept, it is necessary to create a fundamentally new strategy based upon the subclinical recognition of biomarkers of hidden abnormalities long before the disease clinically manifests itself.

Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc. A lack of medical guidelines has been identified by responders as the predominant barrier

for adoption, indicating a need for the development of best practices and guidelines to support the implementation of PPM! Implementation of PPM requires a lot before the current model “physician-patient” could be gradually displaced by a new model “medical advisor-healthy person-at-risk”. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch.

Biography

Sergey Suchkov was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov maintained his PhD as a PhD student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology. In 2001, Suchkov maintained his Doctor Degree at the National Institute of Immunology, Russia.

Healthcare Intelligence and Automation

Benson A Babu

Saint John's Esiscopal Hospital , USA



Introduction: Artificial Intelligence (AI) has emerged to assist physicians in clinical decision making and improving patient care. I will review the latest trends in innovative healthcare AI research. I will review my team's latest research in patient gait analysis, movement disorders, stroke, hospital operative analytics and patient throughput, sepsis management, and medical image detection.

Methods : Technical literature review on AI performance models detecting gait disorders, hospital operative analytics patient throughput, sepsis detection and medical image detection.

Conclusion: Healthcare AI and automation has emerged as tools to assist physicians in making clinical medical image and hospital operative analytic decisions.

Biography

Benson Babu Completed his education from the Cleveland Clinic Foundation, earned hospital quality process improvement physician executive master's in business administration. Areas of Active research include healthcare predictive analytics, machine learning, deep learning, computer-vision automation. He worked in NewYork-Presbyterian Hospital, USA and he is interested in Internal Medicine. He has published many papers in the journals.

Effects of extracorporeal shockwave therapy for knee osteoarthritis in chronic stroke patients

Hea-Eun Yang

Veterans Health Service Medical Center, South Korea



Extracorporeal shockwave therapy (ESWT) has been widely used for pain relief and treatment of musculoskeletal disorders. The aim of this study was to evaluate the effects of ESWT on pain, function and the change of ultrasonographic features in chronic stroke patients with knee osteoarthritis by comparison with placebo treatment. Eighteen chronic stroke subjects with unilateral or bilateral knee osteoarthritis were enrolled and total 33 knee joints were assessed in this study. The patients were randomly allocated to an experimental group (n=9), receiving ESWT and a placebo group (n=9) receiving sham ESWT. For ESWT, patients received the total energy of 1000mJ/mm² with 1000 pulses weekly for three weeks. Assessments were performed before and one week after the treatment using the following measurements ; pain on a visual analog scale (VAS), patient perception of the clinical severity of osteoarthritis (OA), scales of K-MBI (walking, wheelchair transfer), FIM (walking, stairs, wheelchair and toilet transfer) and, ultrasonographic features. The ultrasonographic protocol comprised assessment of articular cartilage thickness, Doppler activity and joint effusion height. All patients completed the treatment of ESWT successfully without any complications. Experimental group showed a significant improvement in VAS

score (4.50 ± 1.87 to 2.71 ± 1.38) and the patient perception of the clinical severity of OA (1.87 ± 0.83 to 2.75 ± 0.46). There were also significant improvements in wheelchair transfer (4.12 ± 1.55 to 4.62 ± 1.30) components of the FIM scale score. In ultrasonographic features, increase of Doppler activity was observed in medial joint of experimental group right after the ESWT. This study demonstrated that ESWT has effects in reducing pain and improving function in chronic stroke patients with osteoarthritis. In addition to already explained effects about pain and function, there was significant increase in Doppler activity after the ESWT treatment.

Biography

Hea-Eun Yang has completed her MA degree in CHA medical school and majored in physical medicine and rehabilitation. She had worked as an Assistant Professor at Severance Hospital and is currently working as a Section Chief at Veterans Health Service Medical Center.

Influence of pain quality on physical performance in subjects with osteoarthritis of knee

Natarajan Venkatesh

Sri Ramachandra Institute of Higher Education and Research Institute, India



Objectives: Neuropathic pain features are frequently observed in subjects with knee osteoarthritis and this may be related to reduced physical performance. The objectives of the study were to compare the physical performance between the subjects with neuropathic and nociceptive pain features in osteoarthritis of knee and to assess the relationship between pain quality and physical performance in subjects with Osteoarthritis of knee.

Methods: 80 subjects, age ranging from 40-70 years of both the genders with symptomatic and radiologically verified unilateral knee osteoarthritis (KOA) were included for the study. Prior to the study all the subjects completed baseline interview including demographic data and the subjects were categorized under neuropathic and nociceptive group by using Pain Detect Questionnaire (PDQ). One time measurement of pain intensity, isometric strength of quadriceps & hamstrings and knee joint range of motion were assessed in both the groups. Physical performance was measured using Osteoarthritis Research Society International recommended physical performance tests for knee osteoarthritis - 40m Fast Paced Walk Test, six Minute walk test, 30 Second chair stand test, Timed up and Go test, Stair Climb Test and osteoarthritis related disability-KOOS questionnaire.

Results: Of the 80 subjects, 40 subjects were in neuropathic group (44%), 40 were in nociceptive group. The physical performance ($p < 0.05$) was reduced in neuropathic group. There existed a weak negative correlation between pain quality and variables measured ($p < 0.05$).

Conclusion: Physical performance was significantly reduced in subjects with neuropathic pain features and there exists a negative correlation between the pain quality and most of the variables.

Biography

Natarajan Venkatesh is working as a Professor in the Faculty of Physiotherapy, at Sri Ramachandra University, Chennai, India. He has been in clinical and teaching Physiotherapy for the past 25 years. He is a PhD scholar. He is working on Influence of Exercise on Autonomic Nervous System. He has Distinguish Service Award by the Indian Association of Physiotherapists on 23.01.05; "Best Teacher Award" (Chosen by Vice Chancellor, The Tamil Nadu Dr. MGR Medical University on 05.09.2011); Fellowship Award-51st by The Indian Association of Physiotherapists 2013 (FIAP); Certificate of Commendation and Cash Award given by the Vice-Chancellor, Sri Ramachandra Institute of Higher Education and Research, for meritorious service in enhancing the level of Physiotherapy in India.

A comparative study to evaluate effect of planter tactile stimulation versus pressure foot insoles to improve balance, mobility and reduce fall in diabetic peripheral neuropathy



Shailendra Kumar Mehta

Janardan Rai Nagar Rajasthan Vidyapeeth, India

Background: Diabetic peripheral neuropathy ulcers on the plantar surface of the foot are typically found in diabetic patients with peripheral neuropathy. Pressure beneath planter surface of foot is increased in diabetic foot result of a combination of morphological sensory abnormalities. Sensory loss plays a vital role in predisposing to the development of these lesions. A new technique that may improve tactile, and possibly proprioceptive, feedback is the application of noise to the plantar surface of the feet. By adding sub threshold electrical or mechanical noise (vibration with a randomly varying frequency) to a sub threshold sensory input, the sensory threshold may be crossed.

Objective of the study: To compare the effectiveness of pressure foot insoles and planter tactile stimulation in improving balance, mobility and reduction of falls in diabetic peripheral neuropathy patients

Methodology: Study conducted on 100 adults with diabetic peripheral neuropathy participants will be randomized to reserve planter tactile stimulation group A (n=50) and vibrathotic insole group B (n=50) to be ware for 12 weeks. The primary outcome measure functional advance balance scale with lower value indicating poor balance secondary outcomes measure functional gait assessment

Results: It is observed Significant difference in FABS & FGA

score among subjects of group A and group B subjects were observed at 1, 4, 8, and 12 weeks. ($P<0.05$) thus in subjects of group A and group B the average difference in FABS & FGA score was not matched from 1 week to 12 weeks and more increase in FABS & FGA score was observed in group B as compared to group A. Also significant increase in FABS & FGA score was observed in both the groups from the day of arrival till 12 weeks. ($P<0.05$)

Conclusion: This study suggests that effectiveness of pressure foot insoles and planter tactile stimulation in improving balance, mobility and reduction of falls in people with Diabetic peripheral neuropathy.

Biography

Shailendra Kumar Mehta is working as a Principal in the Department of Physiotherapy at JRN Rajasthan Vidyapeeth, Udaipur, India. He has founded SHECR and Social Welfare Foundation and 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 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. His areas of specialization are Cancer Rehabilitation, Lymphedema Management, etc.

Role of virtual reality in chronic pain management in present era

Shiv Singh Sarangdevot

JRN Rajasthan Vidyapeeth University, India



Background: Over the past two decades, virtual reality (VR) is attracting medical practitioners. Earlier research shows that virtual reality (VR) can be successfully implemented in dipping chronic pain regardless of age factor of the patient during and immediately after various medical procedures. To minimize the chronic pain VR has been examined and clinically proved as a superior form of disruption. This could become achievable by creating an environment of interactive virtual reality (VEs) with head-tracking systems, visually stimulating scenery, and audio and tactile feedback.

Purpose: The objective of this research study is to analyze the efficiency of VR in dropping persistent pain.

Method: Thirty (30) contributors with various chronic and acute pain states were analyzed through a five minute virtual reality session. The 'Cool!' application is used for this purpose. Participants have responded intensity of their pain on a scale of 0–10 rating before the VR session, throughout the session and instantly following the session. They were also asked about concentration into the VR world and on probable side effects. A head mounted display (HMD) was utilized with every subject. Not a single discomfort has been experienced.

Result: Pain was reduced from pre-session to post-session by 33%. Pain was reduced from Pre-session during the VR session by 60%. These changes were both statistically significant at the $p < .001$ level. Three participants (10%) informed no alteration between pre and post pain ratings. Ten participants (33%) conveyed full relief in pain during the VR session. All participants (100%) felt pain is reducing to some extent between Pre-session pain and during-session pain.

Limitations: Due to heterogeneity, we were not capable to carry out meta-analyses.

Conclusions: VR is an effectual healing tool for dropping chronic and acute pain. There are some studies, which suggest that VR can reduce chronic pain during the intervention; however, more facts are required to understand that Virtual reality is successful in lasting reductions in chronic pain. VR has been constantly verified in decreasing pain, nervousness, spitefulness, time spent thinking about pain and superficial time spent in a medicinal modus operandi. However, other studies have also found harmful effects, diversified findings and restrictions owing to age and/or technology. Few studies made research on VR as a complementary intervention for controlling chronic and acute pain or facilitating pain rehabilitation. VR showed preliminary guarantee for controlling chronic pain and facilitated long-standing pain rehabilitation; however, several questions remain yet to be answered.

Biography

Prof. Shiv Singh Sarangdevot is the Vice Chancellor of Janardan Rai Nagar Rajasthan Vidyapeeth University, Udaipur. Executive President, All India Association of Vice Chancellors and Academicians.

Thermo balancing therapy opens a new era in physiotherapy, using the energy of one's body

Simon Allen

Fine Treatment, UK



Physiotherapy is a medical speciality that works with people to determine and maximize their ability to perform physical functions with the help of exercise prescriptions, hydrotherapy, electrotherapy, joint mobilization and to treat pain and other acute and chronic conditions. Despite the fact that physiotherapy has been used for thousands of years, little attention has been paid to this non-drug and non-invasive treatment over the past decades. Thermo balancing therapy and Dr Allen's device for the treatment of chronic internal problems was invented and received a US patent. This therapy uses the energy of the human body to improve the condition of the affected organ. The natural thermo element in the device accumulates heat, radiated by the body and turns into a source of energy itself. This innovation changes the view of health professionals on physiotherapy as an auxiliary method in the treatment of diseases with the help of drugs and surgery. 10-year empirical data of using thermo balancing therapy with Dr Allen's device showed positive changes in the symptoms and parameters in people with chronic internal diseases, including back pain, coronary heart and kidney stone disease. Two clinical studies on thermo balancing therapy by using Dr Allen's device were conducted in 124 men with BPH and 45 men with CP/CPPS. The symptoms and parameters of patients were measured and compared in

the therapy and control groups. These studies demonstrated that Dr Allen's device reduced prostate volume and urinary symptoms ($P<0.001$) in the BPH treatment group. Pain score was reduced, and prostate volume decreased ($P<0.001$) in men with CP/CPPS. In the control groups no difference was observed. Thus, the empirical data and results of clinical trials allow us to recommend innovative Thermo balancing therapy as an effective physiotherapeutic tool for pain relief and the treatment of chronic internal diseases in any practice.

Biography

Simon Allen has obtained his PhD in Medicine in 1978. For over 14 years he worked and subsequently headed a hospital's cardiovascular department and treated patients with renal diseases. He had authored many scientific articles on metabolic disorders, including those linked to obesity, kidneys, arthritis, cardiovascular and gastroenterological diseases. He has lectured Medical Doctors pursuing higher medical qualifications. He then devoted nearly two decades to further medical research into various chronic internal diseases. He has established Fine Treatment, UK and is the author of the origin of diseases theory and the inventor of effective physiotherapeutic devices which enable the thermo balancing therapy.

DAY 2

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Aortic diseases in patients with APKD on hemodialysis

Katerina Ristoska

PZU Sistina nefroplus, Macedonia



Cardiovascular complications are a common cause of increased mortality in patients on an HD program. APKD is a common hereditary disease leading to CKD and the need for hemodialysis treatment, associated with important clinical extravascular and vascular manifestations, such as aneurysmal aortic enlargement, aortic dissection, intracerebral aneurysms without and with complications, hypertension, etc. The prevalence of ADPKD ranges from 1: 400 to 1: 1000 and is a leading cause for ESRD development, affecting 12.5 million people globally and is a 4 leading cause for ESRD. The incidence and risk of developing aortic aneurysms and aortic dissection in patients with APKD is unclear due to the insufficient number of studies and data, especially for patients on hemodialysis program. Our study included all patients who performed hemodialysis treatment in the period 01.03.2014 to 29.02.2020 (n = 1676). From them in the 338 patients was diagnosed APKD (20.17%). Non-APKD group was set up as the comparison control group at 1:10 ratio whose number is 1338. The results indicate that patients with APKD have a higher frequency of comorbidities, unlike those of non-APKD group. The development of aortic aneurysms in patients with APKD was significantly more frequent than in non-APKD patients (59.17% vs. 2.99%, p <0.0001). Mortality from complications of aortic aneurysm was significantly higher in the APKD group (5.03% vs 0.82%, p <0.0001). 95% of patients with APKD had high blood pressure and thus a very high risk of developing aortic dissection. 15.79% were undergoing aortic surgery because of acute aortic dissection

and were implanted on a prosthesis. From them 6.67%, died after five years since the operation. The risk of developing aortic aneurysms, as well as the development of complications, with patients with APKD on hemodialysis program is the significantly increase in comparison with those patients who do not have APKD.

Biography

Katerina Ristoska has completed her Graduation in Medical Faculty, Skopje, Republic of Macedonia, where she also attended her specialization in internal medicine. Currently, she is the Author and Coauthor of 57 publications at the international congresses at home and abroad, as same in the several other journals. She was Contributor on two multi-centric studies of pharmaceutical company "Krka-Farma" DOOEL Skopje. She is a Fellow of New Westminster College, Vancouver, British Columbia, Canada; Member of The Macedonian Association of internal medicine, ESC, EAPCI, HFA, EACVI, EAPC and ACCA; Member of ESC Council on Cardiovascular Nursing and Allied Professions, ESC Council on Hypertension, ESC Council on Valvular Heart Disease, the Member of Working Group on Grown-up Congenital Heart Disease, the Member of Working Group on Aorta & Peripheral vascular disease; Member of ERA-EDTA Diabetes Group, ERA- EDTA EUREKA -M Working Group of European renal and Cardiovascular medicine, ERA - EDTA CKD- MBD Working Group and an Accredited Examiner of a doctor's professional exam for obtaining a work license and Editor-In-Chief in the International Journal of Medicine and Healthcare and Section Editor in the Interdisciplinary Studies, for Healthcare in International Journal Anglisticum.

Clinical profile and outcome of methanol poisoning in critical care unit of Bangladesh



Uddin Ryhan Md Ahad Abdul

BGC Trust Medical College & Hospital, Bangladesh

Introduction: Methanol is a toxic alcohol that is used industrially as a solvent, pesticide and alternative fuel source. Methanol poisoning (MP) remains a common problem in many parts of the developing world, especially among members of lower socioeconomic classes. This may be accidental or done purposefully in an attempt to die by suicide. When methanol is broken down by the body it results in formaldehyde, formic acid, and formate which cause much of the toxicity. High anion gap metabolic acidosis and base deficit are characteristic findings in MP patients. After a latent period which usually lasts 12 to 24 hours, metabolic acidosis, kidney failure, optic neuritis, retinal edema, respiratory or cardiac failure and coma may develop depending upon the methanol dose ingested. Many outbreaks of methyl alcohol poisoning have occurred in developing countries, such as Bangladesh.

Objectives: To evaluate the clinical profile and outcome of methanol poisoning in critical care unit.

Materials & Methods: This cross sectional, observational study was conducted among 32 patients of methanol poisoning admitted in ICU. Data collected included history, complete systemic examination, time to presentation, amount

of alcohol ingested and results of laboratory investigations, such as hemogram, glucose levels, hematocrit level, arterial pH, electrolyte status, as well as hepatic and renal function tests. Outcome measures included determining the complete recovery or development of any complication and death.

Result: A total of 32 patients were evaluated. Maximum number of patients 18(56.2%) were between 19-30 years, mean age of the patient was 28.9 ± 3.8 years. Abdominal pain, Visual disturbances, respiratory manifestations, and loss of consciousness were the most common clinical manifestations on admission time, reported 81.2%, 78.1%, 59.3% & 56.2% respectively. Most patients 25(78.1%) had metabolic acidosis at presentation with median of pH was 7.15. The median of PaCO₂ was 21.38 mmHg. All patients received sodium bicarbonate. Ethanol as antidote and folic acid were given. Study shows that 84.3% of the patients recovered and 5(15.6%) expired.

Conclusions: Early treatment increases the chance of a good outcome. The degree of acidosis at presentation appears to determine final outcome; early presentation and treatment did not seem to significantly alter the outcome.

Biography

Dr Ryhan has completed his Medical graduation from Institute of Applied Health Science in 1996, there after he completed his post-graduation, specialized in Internal Medicine in 2004. He has published more than 22 papers in reputed journals and has been serving as an editorial board member of reputed journals. He is member of Society of Medicine of Bangladesh, Bangladesh Society Critical Care Medicine; Bangladesh Society of Emergency Medicine; Indian Society of Critical Care Medicine, Asia Pacific Association of Critical Care Medicine. He is working as a Professor & Head of Internal Medicine of BGC Trust Medical College & Hospital, Bangladesh. Beyond the Medicine he has interest & specialist on Critical Care. He is also a course coordinator of Mechanical Ventilation in Medical Centre Training Academy, Bangladesh.

Interdisciplinary approach in pain management: physical analgesia and phantom pain

Ivet Koleva

Medical University of Sofia, Bulgaria



Pain is an unpleasant sensory and emotional experience, associated with actual or potential tissue damage (International Association for the Study of Pain). Physical analgesia is the application of physical modalities for pain management (electric currents, magnetic field, light; cryo- and thermo-agents; mineral waters and peloids; manual therapy, analytic exercises and soft-tissue techniques (different types of massages, stretching and post-isometric relaxation); reflexory methods. In the multi-disciplinary and multi-professional team for pain management a lot of medical specialists and health professionals are included. Different types of pain are described. In clinical practice, post-amputation pain is a challenge for professionals. Most of amputees feel residual limb (stump) pain, phantom sensations, phantom pain. In the pain management of amputees, various medications and physical modalities are applied. We present some results of our own clinical experience, with the purpose to prove the impact of some contemporary physical modalities (Deep Oscillation and Laser therapy) in the pain management. The goal was to realize a comparative evaluation of drug, physical and combined analgesia in the complex rehabilitation of patients after trans-femoral amputation suffering from stump pain and phantom pain. The comparative analysis of results shows a significant improvement of: pain (Visual analogue Scale, evaluation of stump tenderness), autonomy in everyday activities and depression (scales of Zung, McGill Quality of life questionnaire). Physical analgesia has not adverse effects

and side consequences, and can be applied in combination with other therapies (promoting medications' analgesic effect). We consider that the complex algorithm for pain management must include systematic drugs (and vitamins), rehabilitation complex and patient education. The synergy between different physical modalities is the logical base for prescription of complex rehabilitation program, comprising one or two of every group of physical factors: pre-formed modalities, thermo- or cryo-agents, physio-therapeutic and ergo-therapeutic procedures. In conclusion, we recommend our complex pain management programme.

Biography

Ivet Koleva is a medical doctor, specialist in Physical and Rehabilitation Medicine (PRM) and in Neurology. She published several articles in Bulgarian and international peer-reviewed scientific journals. She is author of several books and monographs. She defended three scientific theses: for Philosofy Doctor in Medical Sciences – on the topic Physical Prevention and Rehabilitation of the Diabetic Polyneuropathy; for PhD in Pedagogics – Contemporary Educational Methods in the Rehabilitation Field; for Doctor Es Medical Sciences - Neurorehabilitation algorithms for patients with socially important invalidating neurological diseases.

Impact of hospital management processes re-engineering on patients with ST segment elevation myocardial infarction: A single centre experience



Bohan Xiao

China-Japan Union Hospital of Jilin University, China

CJ Hospital (CJH) is open to patients with highly critical illness from the entire province of Jilin. The numbers of in-patient and out-patient visits to the hospital were 132,197 and 1,649,142 respectively until 2018. The annual numbers of patients with cardiovascular diseases accounted for a large proportion: 13,538 in-patient and 92,617 out-patient respectively. CJH started a series of process reengineering research work during the past six years to seek a more reliable and effective management process. This research discusses the impact of the novel management process on the effect of pre/in-hospital treatment to the patients diagnosed with STEMI during 2015 to 2018. A sample of 605 STEMI patients were divided into groups based on years and methods they transported to CJH. To compare and analysis data by ANOVA and chi-square test, including age, ratio of gender, SO-FMC, FMC2B, cardiogram to diagnosis time, D2B, hospital days, pass

ED and/or CCU and in-hospital mortality. Our reengineering method had some remarkable achievements. We are working on and seeking more possibilities of high quality, effective and prompt rescue process for STEMI patients. The more developments will be discussed in the future report.

Biography

Bohan Xiao has completed her MBA from School of Management, Jilin University in 2017, and Postgraduate Diploma studies from University of Southampton, School of Medicine in 2012. After worked for the District Level Center of Disease Control for three years, she has been focusing on hospital management for four years and takes an active part in management process reengineering in the hospital she serves.

Effects of low-dye taping on improvement of symptoms and changes in gait plantar pressure in plantar fasciitis patients

Hea-Eun Yang

Veterans Health Service Medical Center, South Korea



Plantar fasciitis is the most common cause of pain in heels. Although it is encountered in clinical setting, it is a disease with low compliance of patients at the time of treatment since it is difficult to find treatments that result in satisfactory improvement in symptoms. This Study aims to examine the effectiveness of low-Dye taping by analyzing the improvement of symptoms, whether there is improvement in the functional aspect and the changes in the plantar pressure when walking as objective index. Total of 21 plantar fasciitis patients were chosen as subjects of the study. Low-Dye taping and sham taping was alternatively applied to the subjects for duration of a week for each at a time. Analysis of plantar pressure and gait parameters using AOFAS (American Orthopedic Foot and Ankle Society) Scale that evaluates the pain and functional aspects of the foot and SmartStep™ pneumatic insole was carried out 3 times, once prior to commencement of treatment, once following low-Dye taping and once following sham taping. The results were then analyzed. Although there were improvements in AOFAS Scales in both low-Dye taping and sham taping, the extent of the improvement was greater

for low-Dye taping. Key gait parameters including cadence, walking speed, stance phase ratio, etc did not display significant difference with the normal group even before the treatment, and no significant difference was observed even after both tapings. In the case of plantar pressure, the pressure on the hind foot in the stance phase prior to treatment was lower than the normal group. The pressure on the hind foot displayed statistically significant increase after application of sham taping and low-Dye taping. Although the extent of increase in the pressure in the case of sham taping was only slight, low-Dye taping illustrated more definitive increase in pressure.

Biography

Hea-Eun Yang has completed her MA degree in CHA medical school and majored in physical medicine and rehabilitation. She had worked as an Assistant Professor at Severance Hospital and is currently working as a Section Chief at Veterans Health Service Medical Center.

Balance and gait training through robotic neurorehabilitation with exoskeleton

Ivet Koleva

Medical University of Sofia, Bulgaria



Neurorehabilitation (NR) is an interdisciplinary thematic field between Neurology, Neurosurgery, Physical and Rehabilitation Medicine. Rehabilitation is a functional therapy, based on a detailed functional assessment. Gait is an important element of the everyday life functionality of patients in NR-clinical practice and is crucial for their independence in activities of daily living (ADL), respectively for their autonomy and quality of life. The goal of current work is to emphasize the potential of modern NR-methods for balance training and gait recovery, as exoskeletons and robotic rehabilitation. We will present some typical clinical cases-patients with post-stroke hemiparesis (Case-1), with multiple sclerosis (MS) quadriplegia (Case-2), spinal cord injury (SCI) with inferior paraparesis (Case-3) and cauda equine syndrome (Case-4). In all patients we applied detailed neurological exam, functional assessment through classic scales and through the International Classification of Functioning (ICF). For treatment, we created a complex NR-programme (of 20 procedures) with synergic combination of different physical factors: physiotherapy, ergotherapy, functional electrical stimulations (FES) and Exoskeleton-NR using Hybrid Assistive Limb (HAL). In every case we adapted the NR-complex to the concrete patient in the correspondent phase of his disease and disability. In patients with MS-quadruparesis, post-stroke hemiparesis and post-traumatic SCI-central paraparesis we applied a stable method of FES with tetanic pulses - for the

muscles extensors (dorsal flexors) of the ankle and toes. In the patient with cauda equine syndrome we applied iontophoresis with low frequency electric currents and a neuro-mediator (the Bulgarian drug Nivalin), and FES for the peripheral nerves of the lower extremities (femoral, peroneal and tibial) and for the correspondent innervated muscles (especially mm.quadriceps femoris, tibialis anterior and triceps surae). In all cases we observed significant functional recovery-reduction of muscle weakness, balance stabilization and gait recovery (with walker or crutches), amelioration of autonomy in ADL.

Biography

Ivet Koleva is a medical doctor, specialist in Physical and Rehabilitation Medicine (PRM) and in Neurology. She published several articles in Bulgarian and international peer-reviewed scientific journals. She is Author of several books and monographs. She defended three scientific theses: for Philosophy Doctor in Medical Sciences-on the topic Physical Prevention and Rehabilitation of the Diabetic Polyneuropathy; for PhD in Pedagogics-Contemporary Educational Methods in the Rehabilitation Field; for Doctor Es Medical Sciences-Neurorehabilitation algorithms for patients with socially important invalidating neurological diseases.

Increasing physical activity and decreasing sedentary lifestyle in postmenopausal and inactive women

Inés Llamas-Ramos

University of Salamanca, Spain

Introduction: During the transition to menopause, women experience various psychological, hormonal and physical disorders that can affect their health. Physical activity is considered an important strategy in the prevention and control of these changes. However, only 32% of this population reaches the current recommendations on physical activity.

Objective: To assess the effect of an intensive intervention based on a combined exercise program in a randomized clinical trial which includes a Smartband, increase physical activity and decrease sedentary lifestyle, in postmenopausal and inactive women.

Methodology: This program will be developed by nurses and a physiotherapist. 200 inactive postmenopausal women, aged 45-70 years will be included. They will be selected through consecutive sampling, and randomized to the control group and intervention group. Both groups will be given standardized advice on physical activity. The intervention group will also receive a Smartband and will carry out a 12-

week supervised program of aerobic and resistance exercise. The main result will be the increase in physical activity and the decrease in sedentary lifestyle, measured through an accelerometer, placed on the participants for a week.

Discussion: This study will allow us to assess the effectiveness of intensive intervention based on a combined program of physical activity and a Smartband, in postmenopausal and inactive women.

Biography

Inés Llamas-Ramos has completed her PhD at The University of Salamanca, Salamanca, Spain. Currently, she is working at the University of Salamanca as a Professor in the Department of Nursing and Physiotherapy and in Primary Care Research Unit of Salamanca (APISAL). She has published several articles about cancer and dry needling in reputed international journals and has been serving as an Editorial Board Member of various medical journals.



Yoga Specific Therapy on Fibromyalgia

Turkan Ozturk

Avrupa Meslek Yuksek Okulu Physiotherapy, Turkey



Statement of the Problem: Fibromyalgia is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory and mood issues. Research show that fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals. It's not easy to spot fibromyalgia. This is one disease that doesn't have many visible signs. Most symptoms of fibromyalgia, includes pain, muscle tenderness, and fatigue. These signs are hard to see and spot on in day to day life and confusing as well. Although fibromyalgia isn't fatal, it can have serious, lifelong effects. A painful disease like arthritis or an infection raises your chances of getting fibromyalgia. Emotional or physical abuse. Children who are abused are more likely to have the condition when they grow up. This may happen because abuse changes the way the brain handles pain and stress.

Methodology & Theoretical Orientation: Numerous body types and physiological variations like height, weight and limb length diagnosed with Fibromyglia were tested and

prescribed with specific stretching technique. Findings: People who started this Yoga specific muscle stretches were found to have reduced pain which was equivalent to the pain reduced my drugs.

Conclusion & Significance: Patients who were diagnosed with fibromyalgia and underwent yoga specific stretches were able to control their muscle pain caused by fibromyalgia significantly and more efficiently than under generalized exercise pattern.

Biography

Turkan Ozturk is a final year physiotherapy scholar who has also been working into EKG, Medical first aid, nuclear medicine, pelvic pain and endometriosis. Dr. Ozturk posses high knowledge in feild of Yoga and manages to combine yoga therapy and physical rehabilitation.