EuroSciCon

DAY 1

Scientific Tracks & Abstracts

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7th Edition of International Conference on

Internal Medicine and Patient Care

&

6th Edition of International Conference on

Pain Management

March 26-28, 2018 | Vienna, Austria

DAY 1

March 26, 2018

Sessions

Internal Medicine and Patient Care | Primary Care | Intensive Care Medicine | Infectious Diseases | Emergency Medicine | Adult Diseases | Epidemiology | Geriatrics | Telemedicine | Sports Medicine | Fundamentals to Pain Management | Epidemiology and Classification | urrent Diagnosis and Scoring Systems | New Frontiers in Neuropathic Pain | Anesthesia as Pain Treatment | Current Therapies in Pain Management | Various Aspects of Opoids | Pain Medications

Session Chair
William Rowe
Medical University of Ohio, USA

Session Co-Chair
Sergey Suchkov
I M Sechenov First Moscow State Medical University, Russia

Session Introduction

Title: Integrating cognitive behavioral methods as first line pain management

F Cal Robinson, Orthopaedic & Spine Center, USA

Title: Head and neck: Interest of botulinum toxin against pain and inflammation

Dominique Batifol, University Hospital Gui de Chauliac, France

Title: The effectiveness of glucocorticoid-induced osteoporosis prevention in polymyalgia pheumatica patients

Tara Swami, University College Cork, Ireland

Title: A new simplified tolerance scale for the assessment of the success of ultrasound guided peripheral nerve blockade

Robert Julius Almasi, University of Pecs Medical School, Hungary

Title: Clinical result-assessment of CABG to elderly patients, depending on the conduits-variety

Veronika Goncharova, Novosibirsk State Medical University, Russia

Title: Comparative analysis of off-pump and on-pump coronary artery bypass grafting

Sementeeva Mariia, Novosibirsk State Medical University, Russia

Title: Myofascial pain syndrome and sensitization

Areerat Suputtitada, Chulalongkorn University & King Chulalongkorn Memorial Hospital, Thailand

Title: Examine acute and chronic pain situations in Hong Kong working populations

Tang Shuk Kwan, The Hong Kong Polytechnic University, Hong Kong

Title: Investigating the Pharmacology of Mitoxantrone in Acute Myeloid Leukaemia (AML)

Maria Satya Paramitha, University of Indonesia, Indonesia

Title: Vitamin D status in egyptian adolescent females with iron deficiency anemia and its correlation with serum iron indices

Eman Eladawy, Spescialized Medical Hospital, Egypt

Title: Efficacy of transcutaneous electrical nerve stimulation in reducing sternal pain and improving pulmonary function in postoperative sternotomy patients

Natarajan Venkatesh, Sri Ramachandra University, India

Title: Restless leg syndrome in Iranian family

Zahra Alibabaei, Masters of Genetic, Iran

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INTEGRATING COGNITIVE BEHAVIORAL METHODS AS FIRST LINE PAIN MANAGEMENT

F Cal Robinson
Orthopaedic & Spine Center, USA

The Institute of Medicine's report on relieving pain in American has guided pain assessment and treatment in profound ways. It is also attempting to provide guidance regarding the importance of multidisciplinary pain care, recognizing the primary focus of pain relief from biomedical interventions have left much of the population without improved skill at managing pain sensation. The historical shift that emerged a generation ago moved pain management from a joint involvement with the patient as participant to the patient as recipient of care, to physician as primary care provider and responsible pain control manager. This of course was further reinforced by the multiple pain medications developed and marketed to alleviate pain, reduce pain intensity and design a chronic pain cohort dependent on opioid therapy as their life tool. The evidence of a failed trajectory is obvious, and much back pedaling is required in order to more effectively assist patients with skills and tools designed to assist them on their path. Responsible and ethical physicians or pain management providers are not basing care on the primary goal of pain reduction. This year has redefined pain management care in the United States and many laws now restrict the liberal availability of opioid analgesics, although the conditioning that took place over the past twenty years is now having to be addressed. As the pendulum shifts towards patients confronting the unreasonable if unattainable desires of total pain relief, the culture is also recognizing that being dependent on ineffective opioid analgesia presents with costly social risks. Additionally, for many patients with neuropathic pain complaints, opioid analgesia is not recommended. The realization that offering pain medication as primary pain treatment response, is being challenged. I would like to acknowledge the barriers that interfere with offering cognitive behavioral interventions as first line interventions, and the attitudes, practices and professional responsibilities that are necessary for integrating such options.

Biography

F Cal Robinson is a Medical Psychologist with an extensive career in pain management and pain medicine. His early private practice in Indiana, USA centered on the assessment and treatment of behavioral medicine disorders. In addition, he was Clinical Director and Co-owner of the Spine & Rehabilitation Institute. He was recruited in 2001 to the Elliot Health System and hospital in Manchester, New Hampshire as clinical director of their interdisciplinary pain program. He led the organization to obtain full accreditation with accommodation from CARF, the Commission on Accreditation of Rehabilitation Facilities for the Interdisciplinary Pain Program. While in New England, he was active in the New England Pain Association (NEPA) the regional affiliate society of the American Pain Society. He became the state representative for New Hampshire, then Vice-President and eventually President of NEPA for the 2005-2006 year. During that time frame, he was also the President of the state pain initiative representing New Hampshire, funded by the American Cancer Society.He was recruited in 2006 to the Marshfield Clinic in Wisconsin as pain psychologist for the western division. He accepted a one-year contract with the Department of Defense at Elmendorf Hospital in Anchorage, Alaska as the Behavioral Health Consultant in 2010. He was subsequently recruited to become the director of Chronic Pain and Addiction at the Yale affiliated psychiatric hospital, Silver Hill Hospital, in Connecticut. Seeing the opportunity to be closer to his daughter and grandchildren who lived in Oakdale, Minnesota, he rejoined the pain management program at Marshfield Clinic in 2011 as pain psychologist for the western division.His most recent publication was feature article for the Carlat Psychiatry Report (November 2012), "Chronic Pain, Comorbidity and Treatment Complexity." His clinical interests center on the theory and practice of Acceptance and Commitment Therapy (ACT) especially for chronic pain, suffering, abuse and affective disorders. He is Board-Certified in Medical Psychology from the American Board of Medical Psychology.Join Dr. Robinson for one of our group sessions on Mindfulness Based Chronic Pain Management.

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HEAD AND NECK: INTEREST OF BOTULINUM TOXIN AGAINST PAIN AND INFLAMMATION

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To describe the treatment by botulinum toxin type A (BoNTA) for seven painful pathologies of head and neck: cervical neuralgia, trigeminal neuralgia, migraine headache, articular pain, hypertrophic scars pain and inflammation, post-operative muscular pain of the cervical spine and muscle pain due to stiffness of the cervical spine following hypertonia and hyperactivity of the manducatory muscles. BoNTA has been used for forty years by its action on muscles. During the last decade new indications have been added, following the proof of the effect of the BT on numerous neurotransmitters. Technically, we inject into the muscles to relax them, into the keloid scars or immediately around to stop the inflammation, to relieve pain, we simply follow it, by topping of the skin, the scalp or the oral mucosa, depending on the pathology and the painful zone. For the temporo-mandibular joint, the injection is directly placed in the articulation. The toxin is very efficient on paroxysmal pain and for all these indications, we note a real decrease of the VAS (Visual Analogue Scale) score. For some indications, the dosage can be high, but there are no side effects or very limited. Except migraine headache, the other indications are new and there are not so many teams doing it.

Biography

Dominique Batifol has completed her PhD and Profersor University Hospital of Montpellier, France. She is currently working in the Maxillo-Facial Surgery Department in the University Hospital of Montpellier. She has published 15 papers in reputed journals, has written a book in french "injections in temporo-mandibular disorders" (EUE) and has presented 2 books in the english language.

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THE EFFECTIVENESS OF GLUCOCORTICOID-INDUCED OSTEOPOROSIS PREVENTION IN POLYMYALGIA RHEUMATICA PATIENTS.

Tara Swami and **Dr. Catherine Molloy**
University College Cork, Ireland

Studies indicate that <50% of Polymyalgia Rheumatica (PMR) patients receive glucocorticoid-inducedosteoporosis (GIOP) prevention when nearly all should be prescribed bone protective therapy (BPT) according to current guidelines. Our objective is to determine if PMR patients in Cork are adequately protected from GIOP by examining bone densitometry (DXA) scan results, BPT use, and adherence to guidelines.PMR patients with a documented history of glucocorticoid use who underwent a DXA scan at CUH from 01/01/2016 and 27/10/2017 were included in the analysis. Patient demographic information, use of BPT, and DXA T-scores were obtained from chart review. 153 patients were identified, of whom 69% were female. 73 (47.7%) were taking BPT consistent with current guidelines and 42 (27.5%) were not taking any BPT. At the most recent DXA scan, 42 (27.5%) had normal BMD, 84 (54.9%) were osteopenic, and 27 (17.6%) were osteoporotic. The mean T-score of patients receiving BPT, -1.76, is significantly lower than the mean T-score of patients not receiving BPT, -1.41 (p=0.04). In a regression analysis, BMI and BPT were significantly associated with osteoporosis or osteopenia (p=0.007 and p=0.049 respectively). In 91 individuals who underwent ≥2 DXA scans, patients not receiving bisphosphonates were more likely to have BMD loss over time (p=0.022). Despite guideline recommendations, many patients are not prescribed adequate BPT, demonstrated by a high rate of osteoporosis and osteopenia. The results suggest that PMR patients in Cork are not optimally protected from GIOP, uncovering an opportunity to improve the current management of PMR.

Biography

Tara Swami is a final year medical student at University College Cork in Ireland. She completed a Bachelor of Science at McGill University in Montreal, Canada and a Master of Biotechnology in Toronto, Canada and has a keen interest in Rheumatology.

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A NEW SIMPLIFIED TOLERANCE SCALE FOR THE ASSESSMENT OF THE SUCCESS OF ULTRASOUND GUIDED PERIPHERAL NERVE BLOCKADE

Robert Julius Almasi
University of Pecs Medical School, Hungary

The brachial plexus blockade with ultrasound guidance became popular for upper limb surgery. Peripheral nerve blockade (PNB) avoids complications of general anaesthesia, provides better postoperative analgesia, and lowers the risk of local anaesthetic systemic toxicity. The quality of ultrasound guide (UG) PNB can be characterized by many factors. The evaluation of the onset of sensory and motor blockade sometimes challenging. Even if the anaesthesiologist defined the complete onset of sensory blockade the patient can feel some disturbing sensation during surgery. The evaluation of the quality of the blockade alone doesn't assess the whole intraoperative condition of the patient. To the best of our knowledge there is no any simplified tool for the assessment of the quality of UG PNB from the aspect of sensory, motor, coping and postoperative pain. An easy-to-use, GCS (Glasglow Coma Scale)-like scale was developed and tested in our clinic. Ninety-five patients, ASA (American Society for Anaesthesiologist) I-III were scheduled for unilateral upper extremity surgery using standardized UG PNB anaesthesia. Patients were randomized into 3 groups (G1 lidocaine; G2 bupivacaine; G3 bupivacaine + lidocaine) with standardized dose of 0.4 ml/kg BW, and 30 ml maximal volume. The sensory motor, coping of patient and postoperative pain qualities are measured with a five point scale from 0 to 4 points respectively. There was no difference in the quality of PNB measured by tolerance scale between the three groups. No any operation was abandoned and none of the patients needed GA due to failed PNB. More than 90% of the patient were defined as Good or Excellent. A single pinprick and touch test may fail to define complete loss of sensation because of the possibility of differential block. The satisfaction of patients with the overall care they have received can be evaluated by this new tool.

Biography

Robert Julius Almasi is from University of Pecs Medical School, Hungary.

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CLINICAL RESULT-ASSESSMENT OF CABG TO ELDERLY PATIENTS, DEPENDING ON THE CONDUITS VARIETY

Goncharova Veronika and **Sementeeva Mariia**
Novosibirsk State Medical University, Russia

Coronary artery disease (CAD) is the leading pathology of the elderly people. In spite of pharmacotherapy and the development of percutaneous coronary intervention, the coronary artery bypass graft (CABG) is required for patients with hemodynamically significant coronary atery-stenoses. Operation outcomes depend on the conduit-selection. The study purpose is clinical result-assessment of CABG to elderly patients, depending on the conduits-variety. Patients belong to the high-risks group (Duke index); the average patient's age is 71.4 years old. The surgery results are satisfactory and independent on the chosen conduit immediate. Examinations of patients show change in the angina pectoris' functional class and tendency to increase need for nitrates in a quarter with autovenous conduits through three-five years after treatment. With the use of internal thoracic arteries, the angina pectoris' functional class didn't reach preoperative level in 83% of cases after five years. The best results were achieved with bimammary aortocoronary bypass: no cases return of angina pectoris' within three years after the surgery, there is no need for nitrates, but the operations performed by this method are the least recorded. When assessing the quality of life of patients (WHOQOL-BREF method) higher values were obtained in patients who underwent CABG using an arterial conduit.

Biography

Goncharova Veronika is a 6th year student of the Novosibirsk State Medical University, Russia. She is the scholarship student of the Russian Federation President for Achievements in Science. She has published more than 38 papers and abstracts in Russian journals).

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COMPARATIVE ANALYSIS OF OFF-PUMP AND ON-PUMP CORONARY ARTERY BYPASS GRAFTING

Sementeeva Mariia and **Goncharova Veronika**
Novosibirsk State Medical University, Russia

Among the elderly, cardiovascular diseases often meet and ischemic heart disease is quite common. Coronary artery bypass grafting (CABG) is one of the most effective surgical methods of treatment of coronary heart disease. Owing to the improvement of the surgical technique, methods of protecting the myocardium and methods of anesthesia, there was a reduction in postoperative complications and mortality after CABG. There are methods of CABG by off-pump and on-pump. Despite the fact that off-pump CABG is characterized by an easier rehabilitation period for the patient, about 80% of operations are performed on a stopped heart. The study purpose is to estimate and compare the frequency of the occurrence of postoperative complications and the revascularization effectiveness of off-pump and on-pump CABG. In assessing the beating-heart revascularization detected the following benefits: shorter duration of operation, less operative bleeding, usually performed early extubation, absence postoperative postperfusion syndrome, avoiding complications caused by heart-lung machine, such as hypoxia of vital organs, hematological complications (SIRS), vessels microembolisms, advantageous postoperative period, a decrease in the frequency of complications, especially neurological. It appears to produce better results in high-risk patient populations and elderly patients.

Biography

Sementeeva Mariia is 6th year student of the Novosibirsk State Medical University, Russia. She is the scholarship student of the Novosibirsk Government for achievements in science. She has published more than 38 papers and abstracts in Russian journals.

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MYOFASCIAL PAIN SYNDROME AND SENSITIZATION

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Myofascial pain syndrome (MPS) is identified by palpating skeletal muscle for myofascial trigger points (MTrPs). A MTrP is "a hyperirritable spot in skeletal muscle that is associated with a hypersensitive palpable nodule in a taut band." There are emerging findings suggest that MPS is a complex form of neuromuscular dysfunction consisting of motor and sensory abnormalities involving both the peripheral and central nervous systems. Sensitization in corresponding spinal segments plays a major role in the formation of continuous pain in a given part of the body. The clinical manifestation of dorsal horn sensitization includes hyperalgesia of the dermatome, pressure pain sensitivity of the sclerotome and myofascial trigger points within the myotomes, which are supplied by the same sensitized spinal segment. Hence therapeutic approaches require varieties of techniques for eradiation of MTrP and desensitization of the whole related spinal segment. Spinal segmental sensitization (SSS) is a hyperactive state of the spinal cord caused by irritative foci sending nociceptive impulses from a sensitized damaged tissue to dorsal horn neurons. The clinical manifestation of dorsal horn sensitization includes hyperalgesia of the dermatome, pressure pain sensitivity of the sclerotome and myofascial trigger points within the myotomes, which are supplied by the sensitized spinal segment. There are significant elevated levels of substance P, calcitonin gene-related peptide (CGRP), bradykinin, tumor necrosis factor-α (TNF-α) and interleukin-1β (IL-1β), serotonin, and norepinephrine in the vicinity of the active myofascial trigger point. Overall, pH was significant lower in the active trigger point. The mechanism consists of the nociceptive stimuli generated in the sensitized areas bombarding the dorsal horn of the spinal cord. This causes central nervous system sensitization with resultant hyperalgesia of the dermatome and sclerotome and spreads from the sensory component of the spinal segment to the anterior horn cells, which control the myotome within the territory of the SSS. The development or amplified activity of MTrPs is one of the clinical manifestations of SSS. The Segmental Desensitization treatment consists of injection of local anesthetic agents in the involved dermatome to block the posterior branch of the dorsal spinal nerve along the involved paraspinal muscles. In addition, local anesthetic injection is applied peripherally near the foci of irritation in local soft tissue, directly into taut bands and trigger points, using a needling and infiltration technique. Stretching exercises, local heat application and additional transcutaneous electrical nerve stimulation (TENS) treatment complete the muscular relaxation after the injections. Extracorporeal shockwave therapy (ESWT) and High Power Laser (HPL) also play a role as desensitization. Prevention of recurrence should focus on appropriate ergonomic changes common in patients' day-to-day activities to avoid repetitive stress to the injured muscles. In conclusion, MPS, a common pain syndrome consists of local pathology and SSS. Hence therapeutic approaches require varieties of techniques for eradiation of trigger point and desensitization of the whole related spinal segment.

Biography

Areerat Suputtitada MD is a Professor of Rehabilitation Medicine from Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok, Thailand. She is the Director of Excellent Center for Gait and Motion at King Chualongkorn Memorial Hospital and Chairperson of Neurorehabilitation Research Unit of Chulalongkorn University. She has been involved in education, residency training, research, and clinical treatment related to rehabilitation medicine for more than 20 years. She was invited as international speaker more than 80 times around the world. She received 18 national and international awards, and published more than 60 national and international articles in several areas of Rehabilitation Medicine including Neurological Rehabilitation, Spasticity and Dystonia, Pain, Gait and Motion, and Sport and Exercise Medicine. She has been elected and appointed to important positions in the ISPRM such as the Chairperson of ISPRM Women and Health Task Force and ISPRM International Exchange Committee.

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EXAMINE ACUTE AND CHRONIC PAIN SITUATIONS IN HONG KONG WORKING POPULATIONS

Tang Shuk Kwan[1], Tse Mun Yee Mimi[1], Leung Sau Fong[1] and **Theofanis Fotis[2]**
[1]The Hong Kong Polytechnic University, Hongkong
[2]The University of Brighton, UK

Pain affects human in physical and psychological aspects, as well as the work performance and absence from work. With the busy working schedules, the working population might not be able to seek medical advice and or attend clinics in managing their pain. Acute pain refers to pain persisted less than three months and chronic pain exists more than three months. Acute pain can progress to chronic pain if left untreated. Chronic pain brought long-term disabilities and negative emotions. Starting pain management at early stage is essential. An online survey was done to examine the pain situation and preference of pain education among working population in Hong Kong. It was hoisted on Google Forms from 1st to 31st August 2016. Adults aged 15 or above, performed a formal job or worked for pay or profits during the seven days before the survey were recruited. There were 210 participants in the study (148 females and 62 males). Their mean age was 38.02. 141 participants (67.1%) suffered pain, 40 had acute pain and 101 had chronic pain. In terms of pain intensity, the pain scores for participants with acute pain was 2.46±2.35 while those with chronic pain was 3.01±1.62 on a 0-10 point scale. Chronic pain sufferers experienced longer pain duration (4.48 hours per attack) than acute pain sufferers (1.95 hours per attack). Although both groups took analgesics, chronic pain sufferers did not perceive the analgesics more effective than the acute pain sufferers. Regarding mood and quality of life, chronic pain sufferers experienced a higher level of depressed mood and declined quality of life. Over 80% of all participants chose to continue working even when they were in pain. Concerning pain management education, participants preferred to get pain information on webpage (63.3%). Both groups agreed that they did not receive adequate pain education with insufficient public pain service in Hong Kong. The survey revealed that the working population in Hong Kong are in need of pain service as evidenced by their pain profile. Online pain management education programme offered by healthcare professionals could be a good option to ease the problem..

Biography

Miss Tang Shuk Kwan is a PhD student and student member of Centre for Gerontological Nursing in the School of Nursing, The Hong Kong Polytechnic University. Her research interest is on pain management in working population and older adults, aromatherapy and use of information technology in health promotion. She published a study using aromatherapy to reduce chronic pain in community-dwelling older adults.

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INVESTIGATING THE PHARMACOLOGY OF MITOXANTRONE IN ACUTE MYELOID LEUKAEMIA

Maria Satya Paramitha, Gareth Veal, Philip Berry and **Julieann Sludden**
Newcastle University, UK

Background: Mitoxantrone is an anthracenedione derivative, which functions as DNA intercalating agent. Mitoxantrone has been proven effective to treat acute myeloid leukaemia (AML) through topoisomerase-II inhibition. Previous studies suggest that challenges still emerge due to the side-effects of therapy and the possible involvement of ATP-binding cassette family of membrane transporters in mitoxantrone resistance.

Aims: We aim to develop a high performance liquid chromatography (HPLC) assay, initially, to quantify mitoxantrone in plasma and cell extracts. This assay will be used to investigate whether differences in sensitivity of a panel of AML cell lines towards mitoxantrone is related to mitoxantrone uptake and/or efflux.

Methods: Stability of mitoxantrone in different conditions was investigated in validation of the drug with simple, precise, and reproducible HPLC assay. Initially, growth curves of HL60, U937, AML-3, and HEL were generated to determine incubation time and seeding densities for *in-vitro* cytotoxicity assay with alamarBlue. Intracellular mitoxantrone uptake experiment was performed through incubating cells with different mitoxantrone concentrations for four hours before analyzing the results with HPLC assay.

Results: Mitoxantrone showed no significant differences of stability in plasma (p=0.714) and in plasma with ascorbic acid (p=0.993) after four weeks. HEL showed the highest mitoxantrone accumulation despite displaying the least sensitivity towards mitoxantrone compared with HL60, U937, and AML-3.

Conclusions: Intracellular mitoxantrone concentration does not appear to be related with sensitivity of a panel of AML cell lines towards mitoxantrone. Further studies are necessary to confirm the existence of resistance mechanisms independent from membrane transporters.

Biography

Maria Satya Paramitha is a Medical Doctor who has completed her Undergraduate study in Faculty of Medicine, Universitas Indonesia. She has completed her Master's degree by Research in Cancer from Newcastle University Medical School, United Kingdom. In this project, she was supervised by Dr. Gareth Veal from Newcastle Cancer Centre Pharmacology Group, Northern Institute for Cancer Research.

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VITAMIN D STATUS IN EGYPTIAN ADOLESCENT FEMALES WITH IRON DEFICIENCY ANEMIA AND ITS CORRELATION WITH SERUM IRON INDICES

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[3]Mansoura University Hospital, Egypt

Background: In Egypt, it seems that adolescent girls are candidate for vitamin D deficiency (VDD), mostly due to inadequate sun exposure as a result of the culture and social dress codes. Curently there is growing evidence that VDD and iron deficiency anemia (IDA) are associated .

Aim: Investigate the frequency of VDD in adolescent females with IDA and demonstrate whether VD (vitamin D) level was correlated with serum iron indices.

Methods: Forty adolescent with IDA and 30 healthy control were compared to determine the degree of VD level; where VDD (≤20 ng/mL), VD insufficiency (20-30 ng/Ml) and VD sufficiency (>30 ng/Ml). BMI, CBC, TIBC, serum ferritin, ionized calcium and 25(OH)D were measured.

Results: Subnormal VD was more frequent in the IDA group (75%) than control (40%); where 19 adolescent female patients (47.5%) were VD deficient, 11 (27.5%) were insufficient and 10 (25%) were sufficient; in control group VDD was present in 4 (20%), VDI in 4 (20%) and VDS in 12 (60%) respectively. The mean level of VD was significantly lower in winter than summer (16.87 vs. 31.57 mg/dL, P <0.001). Analysis of the factors potentially associated with D levels was performed, including BMI, season and serum iron profile, and we found no significant independent predictors of VD levels.

Conclusions: VDD has a high frequency in Egyptian adolescent females with IDA, however it is not significantly correlated with iron indicies. Measurement of VD level in such patients, a procedure that is not currently a part of routine investigation, could be necessary.

Biography

Eman H EL-Adawy has completed her MD from Mansoura University. She is a Associate Professor of Internal Medicine and Endocrinology Department in Specialized Medical Hospital, Faculty of Medicine, Mansoura City, Egypt. She published more than 10 papers in reputed journals.

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EFFICACY OF TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION IN REDUCING STERNAL PAIN AND IMPROVING PULMONARY FUNCTION IN POSTOPERATIVE STERNOTOMY PATIENTS

Natarajan Venkatesh
Sri Ramachandra University, India

Background: The sternum which plays a major role in chest movements undergoes incisional trauma following median sternotomy. The incisional pain causes inhibition thereby reducing the pulmonary function. Transcutaneous Electrical Nerve Stimulation (TENS) is an effective low frequency current which reduces pain in various conditions.

Objectives: The objective of this work is to evaluate the effectiveness of TENS in reducing incisional pain and improving pulmonary function.

Methodology: This experimental prospective study was carried out in an institutional setup involving 35 patients who underwent cardiac surgeries through median sternotomy. The patients were randomized into control and experimental group. The groups were comparable with respect to age, sex, intensity of pain before treatment. Patients performed PFT (Pulmonary Function Test) preoperatively, on fourth Post-operative day(POD) and sixth Post-operative day and their pain score was calculated through Visual analogue scale(VAS). The control group received the routine post-operative physiotherapy management and the experimental group along with routine treatment received TENS for six sessions.

Results: We found a significant difference In FEV1 (Forced expiratory volume) between control and experimental group. The experimental group showed significant changes in FEV1 from 4th POD (46.67±10.46) with application of TENS to 6th POD (61.78±15.45) when compared to control group of 4th POD (48.82±13.64) to 6th POD (53.94±12.13). There was significant reduction of VAS in experimental group when compared to control group. This reduction could be the reason for improvement in pulmonary function in these patients.

Conclusions: TENS is the most effective management in reducing pain thereby it improves the pulmonary function in patients who underwent median Sternotomy.

Biography

Natarajan Venkatesh is currently working as Professor in Faculty of Physiotherapy, in Sri Ramachandra University, Chennai, India. He has been in Clinical and Teaching Physiotherapy for the past 25 years. He is PhD Scholar. He is working on influence of yoga on autonomic nervous system. He received Honor Awards for: Distinguish Service Award by the Indian Association of Physiotherapists on 23.01.2005; 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).

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RESTLESS LEG SYNDROME IN IRANIAN FAMILY

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Restless legs syndrome (RLS) is a functional disorder of the genital tract that is characterized by an unpleasant sensation and constant movement of the legs. The syndrome is one of the most commonly diagnosed sleep disorders that affects about 3-15% of the general population, and about 2-3% of people have visible clinical symptoms. The incidence of this disease in women is more than that of men. Precise statistics on the prevalence of the disease in Iran are not available, but on average, 15% of the recipients have mild to severe symptoms. In this article, we study the effects of renal and dialysis diseases and depression in the elderly on the prevalence of this syndrome in Iranian society. As well as health care to reduce the symptoms of the disease and specially effect of hot water bag on severity of restless legs syndrome in hemodialysis patients.

Biography

Zahra Alibabaei is student of Biology and Genetics and will complete her MSc from IAUCTB, University of Tehran, Iran. She is studing on her thesis about RLS in Iran in Pasteur Institute, Tehran. She have an review article about duplication in genome plant and attended 17th Plant Genome Evalution (1-3 october 2017) in Spain. She is member of the Young Researchers and Elite Club of Azad University. She is also a member of ISIC. She have also attended a conference on Assisted Reproductive Techniques in Advanced Fertility Therapy in Tehran in 2016 as a collaborator and participant, and received a certificate. She has certificate from Iranian Biotechnology Society for attending the Shahid Beheshty University, Tehran, 2015.

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DAY 2

Scientific Tracks & Abstracts

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DAY 2

March 27, 2018

Sessions

Chronic Disease | Diagnosis And Case Reports | Internal Medicine and Healthcare | Nephrology | Oncology | Endocrinology | Genomic Medicine | Clinical Trials | Emergency Medical Services | Electronic Medical Record and Disease Management | Pharmacological Approaches for Pain | Non Pharmacological Approaches | Pain Management Specialist | Orofacial Pain Management | Pain Management through Nursing

Session Chair
Sergey Suchkov
I M Sechenov First Moscow State Medical University, Russia

Session Co-Chair
William Rowe
Medical University of Ohio, USA

Session Introduction

Title: Coccidioidomycosis causing ascending aortic aneurysm?

Maitreyee Rai, Michigan State University, USA

Title: Neurorehabilitation algorithms for pain management

Ivet B Koleva, Medical University of Sofia, Bulgaria

Title: Non-endoscopic minimally invasive evacuation of intracerebral haematoma

Tomaz Velnar, University Medical Centre Ljubljana, Slovenia

Title: Understanding the pharmacology and toxicology properties of transdermal buprenorphine and fentanyl to ensure the safety and efficacy of drugs use

Christina Yuen Ki Leung, The University of Hong Kong Shenzhen Hospital, China

Title: Chronic pain reduces acupuncture analgesia

Kun Liu, Academy of Chinese Medical Sciences, China

Title: The positive clinical consequence of early intervention of combined therapy (omega 3 fatty acids and B12 vitamin) on children under 5 with variable forms of cerebral palsy

Khajik Yaqob, Kurdistan Pediatric Society, Iraq

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COCCIDIOIDOMYCOSIS CAUSING ASCENDING AORTIC ANEURYSM?

Maitreyee Rai, Manoj Rai, Mark Mujier, Atinuke Aluko and Shilpa Kavuturu
USA

Background: Coccidioidomycosis is caused by Coccidioides immitis and by C posadasii, approximately 60-65% of cases are asymptomatic, however, it may present with fever, sore throat, cough, headache, fatigue, and pleuritic chest pain. Here we present a case of back pain who was found to have an aneurysm, he was later found to have coccidioidomycosis. The only other risk factor that could have possibly contributed to this presentation was hypertension.

Case: This is a 59-year-old male who presented with acute worsening chronic back pain which apparently started after he twisted his back while playing golf. On admission his blood pressure was elevated at 175/99 mm Hg, he was afebrile with a temp of 97.7°F, pulse was 59/min, respiratory rate was 16/min and SpO2 was 99% on room air. Physical exam was remarkable for Paraspinal tenderness at L4-L5 level. Labs were significant for initial troponin of 0.09. Initial EKG showed T wave inversion in the inferior leads. So the decision was made to start heparin, aspirin and carvedilol. Cardiology performed cardiac catheterization which showed mild, nonobstructive CAD with EF of 60% as well as an ascending aortic aneurysm without dissection. So we ordered computed tomography (CT) angiogram which showed ascending aorta pulmonary artery measuring 5.3 x 5.2 cm. There was no previous CT chest for comparison. Cardiothoracic surgery recommended outpatient follow up with CT in three months. Two days after the discharge of the coccidioidomycosis antibody test was positive with titer reactive at 1:2. A prescription for four weeks of fluconazole was then provided in the view of the diagnostic results.

Discussion: The various etiological factors of ascending aortic aneurysms include Marfan syndrome, type IV Ehlers-Danlos syndrome, atherosclerosis, bacterial [mycotic or syphilitic], arteritis (i.e., giant cell, Takayasu, Kawasaki, Behçet), and trauma. Coccidioidomycosis has never been reported to have caused thoracic aneurysm making this a rare case. Even though underlying hypertension increases the risk of an aneurysm, the presence of coccidioidomycosis at the time of its discovery makes it a possible etiological factor in this patient.

Biography

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NEUROREHABILITATION ALGORITHMS FOR PAIN MANAGEMENT

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The Declaration of Montréal of IASP recognizes chronic pain as a serious health problem. Access to pain management is a fundamental human right. The goal of current work is to prove and evaluate the efficacy of application of different modalities and methods of the physical and rehabilitation medicine (PRM) on independence and quality of life of neurological patients. We effectuate a composition, clinical application and approbation series of complex neurorehabilitation algorithms for functional recovery and amelioration of independence in activities of daily living (ADL) of 1029 patients with neurological diseases, and 516 patients with neurosurgical conditions. The total of 1545 patients was divided into a lot of groups and subgroups, in each one we applied a different neurorehabilitation complex, composed by a synergic combination of natural and pre-formed physical modalities (electrical currents, laser; cryo/thermo-agents, hydro-/balneo-/peloido-therapy; physiotherapy and occupational therapy). Patients were controlled before, during and at the end of the neurorehabilitation course and one month after its end - using a battery of traditional and contemporaneous objective methods (including for pain assessment): tests and scales for motor deficiency, balance and coordination; tests of functional grip of the upper limb; tests of gait and independent motion; complex functional scales for independence in ADL (self service, family, professional & social life); scales for depression and anxiety; visual analogue scale of pain; vibroesthesiometry; thermosensibility; laser Doppler flowmetry; ICF asessment. Based on detailed qualitative and quantitative evaluation we proved the efficacy of application of different PhThReh complexes and programs – on different types and levels of sensory, motor and functional deficiency in patients with diseases and conditions of the nervous systems. Mechanisms of physical analgesia are discussed. In conclusion we must say that physical modalities improve significantly the quality of life of patients with diseases and conditions of the nervous systems.

Biography

Ivet B Koleva, MD, PhD, DMedSc is a Medical Doctor (1986; Medical University of Sofia, Bulgaria), a Specialist in Physical and Rehabilitation Medicine /PRM/ (1990) and in Neurology (1995), with European Certification in PRM (2008). She has completed three scientific theses: PhD in PRM (2004), PhD in Pedagogics (2013), Doctor of Medical Sciences in PRM (2009). She has worked as Associated Professor (from 2006) and as Professor in PRM (from 2010). She is Professor at the Medical University of Sofia, Bulgaria. She has published more than 100 papers in Bulgarian and international scientific journals, author of a lot of monographs and manuals in the field of Physical Medicine and Rehabilitation, Neurorehabilitation, Neuro-ergotherapy, Grasp and Gait rehabilitation, Functional evaluation, Pain management. She is the Co-author of the Bulgarian National PRM Standard (2004). During the period 2007-2015 she was a Member of the PRM Section -European Union of Medical Specialist.

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NON-ENDOSCOPIC MINIMALLY INVASIVE EVACUATION OF INTRACEREBRAL HAEMATOMA

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[2]Alma Mater Europaea University Maribor, Slovenija

Spontaneous intracerebral haemorrhage has a high disability and mortality rate. In cases, when surgery is needed, minimally invasive approach is recommended. A 59-year old patient was admitted due to progressive left sided arm and leg weakness. The neurological status started to deteriorate quickly. A computed tomography (CT) of the head revealed an ICH of 7 cm in diameter with haematocephalus and cerebral oedema. The CT angiography was negative, classifying the haematoma as a primary one. Coagulation and aggregation values were deranged as a result of liver failure. The international normalised ratio (INR) and prothrombine time (PT) were lowered to 1.56 and 0.47 respectively. The platelet count was 33 and the platelet function tests were completely disturbed. Injections of fresh frozen plasma, recombinant coagulation factor VIIa, protrombin complex, vitamin K and platelet plasma were applied. As a result of extensive intracerebral bleeding and consciousness decline, surgery was recommended despite unfavourable laboratory results. A minimally invasive approach was chosen for the ICH removal. A burr hole of 1 cm in diameter was made in the right temporal area. Under the microscope, the liquefied blood was evacuated with aspirator and bipolar. The ICP values remained normal during the course of treatment. The control CT scan showed successfully evacuated haematoma and normal width of the ventricles. The sedation was gradually discontinued after a week. The patient was awake with persistent left sided haemiplegia. In case of patient with numerous risk factors and imminent operation, minimally invasive surgery for intracerebral haematoma is warranted.

Biography

Tomaz Velnar, MD, PhD is a Neurosurgeon and Assistant Professor at Ljubljana Medical Centre. He is also active in research, cooperating regularly with the other two authors. They have started a multicentre study of vitamin D deficiency among older people.

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UNDERSTANDING THE PHARMACOLOGY AND TOXICOLOGY PROPERTIES OF TRANSDERMAL BUPRENORPHINE AND FENTANYL TO ENSURE THE SAFETY AND EFFICACY OF DRUGS USE

Christina Yuen Ki Leung
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Buprenorphine and Fentanyl transdermal patches are used for the management of chronic intractable pain in both malignant and nonmalignant patients. Both buprenorphine and fentanyl are potent opioids, but they have different pharmacology and toxicology properties. It is important to understand the difference in these properties as this information is useful for clinicians and pharmacists to use the opioid patches safely and effectively. Opioid analgesics mimic endogenous opioid peptides by causing a prolonged activation of opioid receptors (usually μ receptor). This receptor medicates analgesia, respiratory depression, euphoria and sedation. Fentanyl is potent, highly lipid soluble, rapidly acting μ-opioid receptor full agonist. Buprenorphine is a highly lipophilic semisynthetic opioid. It has complex pharmacology which is different from Fentanyl. Buprenorphine is a partial μ-opioid receptor agonist which binds to and activates a receptor, but has only partial efficacy compared to a full agonist. This means that it may have ceiling effect and demonstrate both agonist and antagonist effects. In human studies using clinical effective analgesia doses, buprenorphine does not have a ceiling effect to analgesia. However, buprenorphine does have a ceiling effect for respiratory depression. Hence, higher doses can be given with fewer respiratory depression side effect compared with higher doses of fentanyl. The primary side effects of buprenorphine are similar to fentanyl (e.g. nausea, vomiting, and constipation), but the intensity of these side effects is reduced significantly compared to full agonist, fentanyl. The most severe and serious adverse reaction associated with opioid use is respiratory depression, the mechanism is behind fatal overdose. Buprenorphine behaves differently than fentanyl in this respect, as it shows a ceiling effect for respiratory depression. Buprenorphine has slowed off rate (half-life of association/dissociation is 2–5 hours). The slow dissociation from μ-receptor accounts for its prolonged therapeutic effect for treatment of pain. Respiratory depression is rare with buprenorphine, but if occurs, it can be reversed by Naloxone, often larger doses are required than fentanyl because buprenorphine dissociates slowly from the receptors. In conclusions, the pharmacology profile of buprenorphine is complex but unique, and contributes to its distinct safety and efficacy when it is used under appropriate clinical indications.

Biography

Christina Yuen Ki Leung completed two Bachelor's Degrees in England, BSc Management Sciences Degree followed by the BPharm Pharmacy Degree. Following the registration as a pharmacist in the UK, she worked in different London Teaching Hospitals, UK for 16 years. In the last 12 years in UK, she specialized in Pediatrics (especially in PICU and Paediatric Liver), Obstetrics and Gynaecology. She published two articles relating to drugs use in pediatric liver diseases in the UK Children Liver Diseases Magazine. She is also a Registered Pharmacist in Hong Kong. Since 2012, she has been working as the Senior Pharmacist (Clinical Pharmacy in Charge) at the HKU-SZH in China. She is also the Honorary Tutor at the University of Hong Kong, Hong Kong. She delivers lectures to the Master and Undergraduate Pharmacy students relating to drugs use in Pediatrics, Obstetrics and Gynaecology.

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CHRONIC PAIN REDUCES ACUPUNCTURE ANALGESIA

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Acupuncture is a basic method for the treatment of painful disorders and symptoms. Acupuncture is especially good for acute pain and has limited effect on chronic pain relief from clinic practice. This problem has been troubling acupuncturists for a long time. Chronic pain is also a major difficulty in clinical medicine. At present, the effect of analgesic medication is limited. Morphine in the routine doses, in particular, has no good enough analgesic effect for chronic intractable pain and advanced cancer pain. Over the past decade, the reduced effect of conventional analgesia on the treatment of chronic pain is well understood as the endogenous pain modulation system is damaged. Due to the changes of endogenous pain modulation system induced by chronic pain, we carried on systemic basic animal and clinical researches. Our study finds that acupuncture analgesia effect that acts through DNIC was affected. The segmental gate control pathway through which acupuncture analgesia works remains normal. Therefore, in the cases of chronic pain, the best way is local painful regional acupoints acupuncture.

Biography

Dr. Liu has completed her PhD in Institute of Acupuncture and Moxibustion, China Academy of Chinese Medical Sciences. She has worked as assistant professor in Department of Physiology, Institute of Acupuncture and Moxibustion. She has published more than 15 papers in reputed journals and her research has been supported by National Natural Science Foundation of China for twice.

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THE POSITIVE CLINICAL CONSEQUENCE OF EARLY INTERVENTION OF COMBINED THERAPY (OMEGA 3 FATTY ACIDS AND B12 VITAMIN) ON CHILDREN UNDER 5 WITH VARIABLE FORMS OF CEREBRAL PALSY

Khajik Sirob Yaqob
Kurdistan pediatric society-Iraq

Background: Cerebral palsy is a common pediatric problem encountered in about 1:3 per 1000 born children and causing variable mental, motor and behavioral dilemmas. Newlyintroduced trials of neurogenesis with different agents are now extensively evaluated.

Objective: Our study was conducted to evaluate the neurotrophic response to B12 vitamin and omega-3 fatty acids in children diagnosed early with variable forms of cerebral palsy. The response was monitored both clinically and with CT scan as being a highly predictive tool for assessing cerebral palsy.

Design: The study was carried out on 40 cerebral palsy patients; 26 (65%) out of them weregirls, and 14 of them were boys, aged from 0 to 5 years old; from outpatient clinic at Zakho/Duhok General Hospital in Kurdistan Region-Iraq. Patients were treated and followed up to 6 months to one year. They were represented and adjusted by full history taking and clinical examination. Brain CT scans were done for every patient to assess the degree of brain atrophy before starting this combined therapy, and every month for six months to one year. There was an improvement in general health of children after interventional therapy.

Results: The study revealed that early intervention of both omega 3 and B12 vitamin in children under 5 with cerebral palsy (cp) shows great response based on clinical examination and CT scan findings. Almost, after combined therapy, 80% of children with delayed speech have very good response and improvement, 77% of children with delayed milestone and hypertonia, and 87% with delayed walking have positive clinical outcomes. Both sexes have equal response to combined therapy. Such findings were obtained as a result of early treatment and diagnosis of children with (CP). In addition, among the treated children with CP, improvement in CT scan results was obtained. 84% of treated children have great improvement in their neuroimaging results from moderate/severe forms of brain atrophy to a mild form of brain atrophy after being treated and followed up for 6 months - 1 year.

Conclusions: The damaged brain sites based on CT scan results, showed progressive improvement in response to B12 and omega-3 fatty acids upon daily supplement throughout 6 months to one year. However, combining these 2 drugs showed preservative synergistic consequences. B12 vitamin and omega-3 fatty acids are valuable therapy for children with various forms of cerebral palsy particularly when being linked. The greatest improvement in speech and motor development was significantly observed in about 32 patients (80%) of treated children with B12 vitamin and omega- 3 fatty acids. Others have less response to combine therapy as being presented and diagnosed beyond 1 year of age (16%).

Biography

Khajik Sirob Yaqob, MA is a specialist in childs nutrition with interest in pediatric neurology. He has Associate Membership of the RCPCH; Membership of Oxford University Hospitals and he is a Member of American Academy of Nutrition and Dietetics; Member of Kurdistan Pediatric Society, Iraq.

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