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Poster Abstracts

Jin Seok Seo et al., J Pain Relief 2017, 6:6 (Suppl)
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Intraarticular pulsed radiofrequency to treat refractory lumbar facet joint pain in patients with low back pain

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Background: Many treatment techniques have been used for refractory lumbar facet joint pain; however, their efficacy has been controversial. In this study, we investigated the clinical efficacy and safety of intraarticular pulsed radiofrequency for the treatment of refractory lumbar facet joint pain in patients with low back pain.

Methods: Twenty patients with refractory lumbar facet joint pain were recruited and each patient was treated using intraarticular pulsed radiofrequency. The treatment effects were measured using a numerical rating scale, and the technical accuracy of intraarticular pulsed radiofrequency treatment was evaluated independently by two radiologists. Any adverse events or complications were also checked.

Results: We performed intraarticular pulsed radiofrequency treatment at 48 levels of the lumbar facet joints in 20 patients (5 men and 15 women; mean age, 64.50 ± 10.65 years) with refractory lumbar facet joint pain. Pain scores were significantly reduced at 1 month, 3 months, and 6 months after treatment ($p < 0.05$). The face validity revealed good intraarticular pulsed radiofrequency results in all 20 patients, without any serious adverse effects.

Conclusions: The treatment using intraarticular pulsed radiofrequency is an alternative to other techniques in patients with refractory lumbar facet joint pain.

Acknowledgment: This study was supported by a VHS Medical Center Research Grant, Republic of Korea (grant number: VHSMC17021).

Biography

Jin Seok Seo has completed his MD at the age of 26 years from Kyunghee University School of Medicine. He is a physical medicine and rehabilitation doctor of Veterans Health Service Medical Center, Seoul, Korea.

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Vivian Y Lee et al., J Pain Relief 2017, 6:6 (Suppl)
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An exercise intervention to reduce adverse events with HPV vaccination

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Introduction: Human papillomavirus (HPV) has been identified as a necessary cause of cervical cancer, but is uniquely vaccine preventable. HPV vaccine programs face several challenges such as high rates of local adverse events (AE) and psychogenic responses which may reduce vaccine acceptance and contribute to low coverage rates. Exercise at the time of vaccination has been investigated for its potential to adjuvant the immune response, which would be a valuable effect in multi-dose vaccines such as HPV. Notably, exercise may also provide analgesic effects to reduce pain and alter the occurrence of AE.

Method: 116 students (11-13yrs) receiving HPV vaccinations through the school vaccination program were randomized to control (Con) or exercise groups (Ex). Control-group received the vaccination according to usual-care procedure; exercise-group completed a 15-min moderate exercise task prior to the normal vaccination procedure. Participants completed a seven day AE diary with parental supervision.

Results: On average 90% of participants reported an AE per dose. Reported number of days with pain in Ex decreased from dose 1 (2.00±0.23) to dose 2 (1.54±0.23) while it increased for Con (Dose 1: 1.91±0.24; Dose 2: 2.00±0.25; p=0.140). Reported number of days with tenderness decreased in both Ex and Con (p=0.01), with a steeper decrease in Ex (Dose 1: 2.14±0.25; Dose 2: 1.29±0.25) than Con (Dose1: 2.12±0.26; Dose 2: 1.75±0.27). Reported pain and fear of the injection was not different between groups.

Conclusion: Preliminary analysis shows a trend for a benefit in using exercise as an intervention to improve the vaccination process for children. Furthermore, the practicality of this intervention within a school vaccination program seems to be reasonable with all parties involved being satisfied with the logistics.

Biography

Vivian Y Lee has completed her Master's degree from Massey University in New Zealand. She is currently conducting her PhD studies at The University of Sydney..

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Spinal cord injury after percutaneous epidural neuroplasty with anticoagulation therapy in elderly patient

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The occurrence of symptomatic epidural hematoma following percutaneous epidural neuroplasty (PEN) is a very rare but serious complication. This report is to inform a case of patient who developed a severe bleeding complication associated with PEN in elderly person. An 80-year-old man with a history of congestive heart failure and atrial fibrillation, on warfarin treatment, presented with posterior neck pain at C6-7 level was admitted. Ten days have passed since we stopped oral warfarin. He received PEN for pain control. He was damaged the thoracic spinal cord due to epidural hematoma by epidural catheter. Neurological examination revealed T5 (sensory level) incomplete paraplegia (AISA-B). At that time, whole spine MRI demonstrated posterior epidural hematoma (T1-T12) with mild compression of thecal sac and inhomogeneous signal and contrast enhancement in all pulse sequences. After 3 days later, he underwent posterior decompression surgery at T3-6 level for hematoma evacuation. He suffered from both lower limb weakness and neurogenic bladder symptoms. After spinal cord injury rehabilitation for 6 months, motor weakness and bladder function were partially recovered to ASIA-C. The modified Bathel Index score was increased from 39 to 75. We think, in elderly person, it needs much longer discontinuation period of oral warfarin for invasive procedure like PEN.

Biography

Jae-Hyung Kim has completed his PhD from Kyung-Hee University in Korea (South) and he has studied from Stanford University School of Medicine in USA as visiting scholar in 2015. He has been working as a Professor, Kwan-dong University School of Medicine. He has published more than 30 papers in reputed journals.

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Application of ESWT for the neurodestructive effect in painful stump neuroma

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Background: Formation of stump neuroma plays an important role in generation of pain in the amputee. However, these symptoms often do not respond conservative therapy, so management remains difficult. Even if surgical removal is performed, it is known that the probability of regrowth is not low. ESWT has been used to treat various musculoskeletal disorders and is known to have side effects that can cause nerve destruction. So in the patient of painful stump neuroma, we applied ESWT for the neurodestructive effect.

Case: A 74-year-old patient for chronic stump pain. He presented with a history of Rt. transfemoral amputation secondary to a gunshot injury and had been able to gait independently with prosthesis. He complained of parasthetic and shooting pain emanating from posterior mid-thigh to the most caudal point of the stump. These pains interfered with the use of his prosthetic device. We used the ultrasound for scanning of stump site, and detected the 1.7cm x 3.0cm x 3.6cm - sized mass in the sciatic nerve pathway. We identified the location and depth of the stalk of neuroma using the ultrasound. ESWTs were applied once a week, five times in total, targeting the stalk of neuroma. Pstprocedure results showed that immediate pain relief and reduction of neuroma size at 6-months follow-up.

Conclusions: We report the case that relieved symptoms and decreased size of painful stump neuroma after application of ESWT under sonographic guidance.

Biography

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Michael J Poulsen, J Pain Relief 2017, 6:6 (Suppl)
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Effects of therapeutic music on pain in spinal surgery recovery

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Statement of the Problem: Pain is one of the most common experienced symptoms reported by more than 80% of postoperative patients. Approximately 77-98% of post-operative patients report pain following their procedure with 40-80% having moderate to severe pain. Pain is shown to elevate stress levels manifesting in increased heart rates, blood pressures, and oxygen demand. Inadequate pain control can develop into surgical complications causing surgical failure, blood clots, pneumonia, and chronic pain. Complementary and alternative medicine such as music can be used in combination with opioid medication to help improve pain control leading to successful surgical outcomes. The purpose of this evidence-based practice project was to determine if implementing therapeutic music into the post-operative recovery process improves reported pain scores in adult spinal patients.

Methodology & Theoretical Orientation: A one-group pretest-posttest comparison design was performed to help streamline an evidence-base protocol on an inpatient postoperative surgical unit. The evidence-based medicine and transpersonal caring models were used to create and implement a therapeutic music protocol by critically analyzing current literature.

Findings: Data was collected using weekly chart audits retrieved from the paragon electronic medical record (EMR) system.

Conclusion & Significance: The data will be analyzed using an independent t-test to determine the effectiveness of this therapeutic music protocol. Implications for practice will be discussed.

Biography

Michael Poulsen graduated from Valparaiso University achieving a Baccalaureate degree in the science of nursing in 2014. He is currently enrolled in Valparaiso University to earn a DNP in 2017. He currently works as a night charge nurse on a medical and surgical unit at Unity Hospital. He also has been instructing undergraduate clinical experiences at Valparaiso University for the last two years. Michael is also a member of Sigma Theta Tau International (STTI). He is interested in using alternative therapies to help reduce pain and psychological distress following his experience working in a multidisciplinary pain clinic. His interest in alternative therapies led to his DNP project writing a protocol for using therapeutic music to help reduce postoperative pain on an inpatient hospital unit. In December 2016, Michael published his first nursing article entitled "Alleviating Stress with Music" in the ISNA featured magazine *Nursing Focus Magazine*.

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The effect of post-operative exercise program after lumbar spinal surgery

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Many various exercises have been widely known to be effective after lumbar spinal surgery. But the kinds of exercise program, intensity, duration of exercise, etc. are not formalized and by the surgical technique, the application method of various exercises is not well known. And the purpose of this study is to confirm the effect of formalized exercise program on pain and strength after lumbar spinal surgery and to present the concrete exercise methods. We recruited 31 patients (mean age, 62±11.4) with lumbar disc herniation. 15 patients received the exercise program and 16 patients received conventional physical modalities and medications. The lumbar exercise program is composed of relaxation, bed mobility, core stabilization, back extensor and abdominal strengthening, aerobic conditioning programs. This exercise is applied daily for 6 weeks after discectomy and 2 months after spinal fusion. This program is applied daily in phase depending on the post-operative duration and patient tolerability. The visual analog scale, isokinetic strength evaluation (Biodex, Inc, Shirley, NY), balance test (Biodex, Inc, Shirley, NY), functional index questionnaire are measured by pre operation period and post-operative 6 week. After applying exercise program, VAS score, back extensor strength, balance index, functional index questionnaire significantly improved compared to the control group. The post-operative exercise program improves lower back pain, back extensor strength and functional ability in herniated lumbar disc patients who have a spinal surgery.

Biography

Jae-Hyung Kim has completed his PhD at the age of 36 years from Kyung-Hee University in Korea (South) and he has studied from Stanford University School of Medicine in USA as Visiting Scholar in 2015. He is a Professor, a Kwan-dong University, School of Medicine. He has published more than 30 papers in reputed journals.

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Botulinum toxin treatment using ultrasound for pain of open jaw dystonia in progressive supranuclear palsy

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Objective: Oromandibular dystonia (OMD) is an infrequent condition in progressive supranuclear palsy(PSP), which may results in dysfunctional movements of facial, tongue muscles, mandible and temporomandibular joint. Regards of treatments, medical treatment usually showed a little effect on dystonia, botulinum toxin injection has been focused on an alternative treatment for OMD. In this case, we aim to report the treatment of jaw opening dystonia with botulinum toxin A in PSP using ultrasonography

Methods: A 64-year-old man presented with tonic, extended dystonia of axial and OMD, open jaw type. He was diagnosed as PSP at 2014, and prescribed many medicines since then. He was suffering from constant opened jaw, which results in poor mastication, dry mouth and impaired communication. However, there was no response on medications. The patient was treated with injection of botulinumA toxin (Botox) at the lateral pterygoids and the anterior digastrics muscles involved in jaw opening dystonia using ultrasonography. The patient was treated with injections of total 25 units of botulinumA toxin at two points in each lateral pterygoid muscle, and in two points of each anterior digastric muscle of total 25 units at both sides.

Results: Before the procedure, the patient showed constant open jaw state with an impossible of speaking and feeding. After the procedure, the patient showed much improved jaw movement with voluntary jaw movements and even full closed jaw. The improvement was manifested 6 days later after the procedure, and there has been no report of severe side effect after botulinum toxin injection.

Conclusion: Botulinum toxin is a potent neuromuscular paralyzing agent, which cause reversible chemodenervation by blocking the presynaptic release of acetylcholine. In this regards, this case suggested that botulinum toxin A has been proved to be effective in focal dystonia.

Biography

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Agatha Mensah Achampong, J Pain Relief 2017, 6:6 (Suppl)
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Good response in pain reduction with pathogenic oriented treatment in type 2 DM with multiple comorbidities: A case report

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Introduction: Alpha-lipoic is a strong antitoxic which inhibits accumulation of free oxygen radicals while benfothiamine inhibits pathways involved in developing neuropathy while stimulating pathways that play a role in improving neuropathy, such as the pentose-phosphate shunt. The rationale for the use of benfothiamine and alpha lipoic acids in neuropathic pain is to lag, halt or even reverse the progression of neural damage caused by hyperglycaemic metabolism.

Case presentation: A 66-year old female diagnosed with type 1 diabetes at the age of 43, complicated by stage II diabetic neuropathy, treated with Gabapentin 600mg once daily, mild non-proliferative retinopathy and chronic obliterative arteriopathy of the inferior limbs was admitted in our Centre for: elevated glycaemia levels (500mg/dl), nocturia, dizziness, cephalagia, and muscle pain in the posterior legs, exacerbated by effort. On admission: slight ataxic walking, overweight, dry skin and lipohypertrophy due to insulin therapy in the umbilical region. BP=147/69mmHg, Pulse= 76BPM. Lab tests showed mixed dyslipidemia, hypocalcaemia, mild thrombocytopenia, slightly elevated transaminases and poor glycemic control (HbA1c=10.35%). From day 1 i.m. benfothiamine + pyridoxine + cyanocobalamin (Neurossen®) and i.v. alpha-lipoic acid were administered with significant pain improvement (from 10 to 5 on VAS). Gabapentin was stopped due to confirmed patient history of atrioventricular block. Further pain improvement was obtained by adding duloxetine 30mg/day on the 4th day (from 5 to 1 on VAS). Adjustments in insulin were necessary in order to improve glycemic control.

Conclusions: Etiology of pain was plurifactorial: myopathic, arteriopathic and neuropathic. This case was of interest since it points out the possible efficacy of benfothiamine and lipoic acid. Pathogenic oriented treatment may significantly reduce pain symptoms in combination with typical neuropathic therapy and may be considered as cost-effective for patients who can't afford duloxetine as initial therapy.

Biography

Agatha Mensah Achampong has completed her M. Pharm in pharmacovigilance, drug monitoring and safety at the age of 26 years from University of Medicine and Pharmacy in Cluj-Napoca. She is currently an intern in Clinical Pharmacy at the Diabetes Centre.

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A balanced low FODMAP diet is effective in treating fibromyalgia patients-reducing pain and improving life-quality

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Fibromyalgia (FM) is a chronic disease of unknown aetiology, characterized by widespread myofascial pain and reduction in quality of life (QOL). FM and Irritable Bowel Syndrome (IBS) are frequently found to be overlapping "sensory sensitivity syndromes". To date, pharmacotherapy has had limited therapeutic efficacy in treatment of FM. There is growing evidence diets low in FODMAPs (fermentable oligo-di-and mono- saccharides and polyols) are effective in reducing IBS symptoms. We investigated if a balanced low FODMAP diet (LFD) could reduce FM and GI symptoms and improve QOL. We conducted a longitudinal study of LFD intervention using a four-week, repeated-assessment model. Initially, clinical assessments were made and participants presented LFDs. Following LFD treatment, we assessed any effects and reintroduced FODMAPs to the diets. We then conducted final assessments and provided nutritional counseling. Assessment tools included: Revised Fibromyalgia Impact Questionnaire (RFIQ: 0-100), Fibromyalgia Survey Questionnaire (FSQ: 0-31), Severity Score System (IBS-SSS: 0-500), Euro-Quality of Life (QOL: 0-100), and Clinical Outcomes Routine Evaluation (Core-OM: 0-4). The cohort included 38 women, mean age 51 years, with 10 years of FM. Initial assessments showed scores for severity of FM of 22±4.4, RFIQ 65±17, IBS-SSS 275±101 and QOL 48±19. There was 86% adherence to LFD diets accompanied by a significant ($p<0.01$) reduction of FODMAPs intake, from 25 g/day to 2.5 g/day. Follow-up assessments showed significant reductions in VAS Pain, FSQ and RFIQ scores ($p<0.01$). Severity of GI symptoms was reduced by 50% with a significant reduction of IBS-SSS to 132±117. Improvements in FM and gastrointestinal scores were significantly correlated ($r=0.36$; $p<0.05$) and adherence to diet was significantly correlated with "satisfaction with the improvement" ($r=0.65$; $p<0.01$). This pilot study shows that GI and pain symptoms associated with FM can be reduced by restricting FODMAPs. A more comprehensive study of diet therapy for treatment of FM is warranted.

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Impact of pain patient's cancer on their caregivers

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The suffering of patients and caregivers is real in Oncology today, is a global suffering given to the complexity and the multiplicity of aspects involving games during the trajectory of cancer and requires a holistic support of patients. This suffering dislodges the world of care and is only an opportunity to interview the previous relationship. Imaging by functional magnetic resonance techniques were used to identify today a network of brain areas activated in phenomena painful and had shown the close link between proven pain and pain experienced, live the pain and see the pain, seeing someone who has active regions similar in those who observes it, these activated areas are the emotional pain component and are all enabled by visual means. However, the caregiver uses his body mirrored the body of the patient, his emotions and his suffering in an emotional space. The present study makes new contributions to our understanding of this emotional share experienced by caregivers in Oncology at the Morocco. To our knowledge it is the only study devoted exclusively to this type of suffering caused by the confrontation with physical pain and psychic patients with cancer and so far no research has not quite centered on the idea that suffering is contagious and that the individual suffering repercussions on the environment has the effects of the pain of the patient on caregivers in Oncology.

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Intravenous versus oral acetaminophen for adjunctive pain management in patients undergoing spinal fusion surgery

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Statement of the Problem: Patients undergoing spine surgery are often limited in their pain medication options, as providers are often reluctant to utilize non-steroidal anti-inflammatory medications, and opioids have become a mainstay of management for such patients. Opioids are used commonly in this setting and have significant untoward effects. Intravenous acetaminophen holds promise for adjunctive pain management in this clinical setting, and may have opioid sparing effects. However, it is unknown if intravenous acetaminophen is more effective than oral acetaminophen in for such patients.

Methodology: We are conducting a single-center, randomized clinical trial of intravenous versus oral acetaminophen in immediate post-operative care of 1 and 2 level lateral interbody spinal fusion surgery. Our primary endpoint is improvement in Visual Analog Scale for pain, and secondary endpoints include length of stay, opioid-equivalent dosing used during hospital stay, time to ambulation, and Oswestry Disability Index score. A total of 166 consecutive patients will be enrolled, consisting of 83 patients in each arm of the study who meets the inclusion criteria.

Results: Results of this ongoing trial are pending at this time, and scheduled to be finalized in March of 2017.

Conclusions & Significance: Conclusions are pending at this time. The results of the trial will be helpful whether IV acetaminophen is superior or equivalent. There are potential cost savings if equivalence is demonstrated. There is a potential new use and additional pain medication option if superiority is identified for intravenous acetaminophen.

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Self-management programmer after recovery from total knee arthroplasty: A randomized control trial

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Background: Osteoarthritis (OA) of the knee is a major cause of mobility impairment. The prevalence of OA is expected to increase dramatically with aging, contributing to a growing demand for total knee arthroplasty (TKA). According to statistics results, there are more patients that are returning home during a more acute phase of recovery; thus there is a demand of home care interventions for patients still recovering from the TKA. The effectiveness of self-management (SM) programs is evident for people to deal with chronic conditions.

Aim: The aim of the study is to examine the effects of SM intervention for people with TKA, over a 12 months follow-up.

Methods: A randomized controlled trial was applied to examine the SM intervention. Total 139 patients undergoing TKA in the hospital were randomly assigned to two groups. In order to examine the effects of SM intervention, health-related outcomes were collected on 12 months following hospital discharge.

Results: This study shows that there were significant differences ($p<.05$) for both groups, including knee function measurement, self-efficacy for coping with arthritis, symptoms of pain and the frequency of the self-management behaviors. However, there were no significant differences ($p>.05$) for both groups, including quality of life and depressive symptoms.

Conclusion: The study suggests that the SM programmer could improve self-care capability and daily self-management behaviors for patients after TKA. This trend has been facilitated by learning how to self-manage their behaviors of the physical rehabilitation and symptoms. The study provides nursing staff to implement policy and offer health education with references.

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Botulinum toxin type A in pain treatment- clinical experience with 100 patients

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Background: Considered once the most toxic substance in the world, botulinum toxin (BTX) is presently under a more engaging day. Its medical use has gained an important extension in the treatment of dystonia and spasticity. Other fields still support the validation of some clinical trials this is the case of pain.

Methods: We report a clinical experience with 100 patients who presented chronic pain phenomenon, such as migraine, tension headache, lower back pain (LBP), painful diabetic neuropathy (PDN), post herpetic neuralgia (PHN) and trigeminal neuralgia (TN). All patients presented a pain 7/10 on the visual numeric scale (VNS), with or without prior treatment. They were treated with BTX type A each 3 months and followed for 12 months. The doses and routes used were: Migraine (30 units, 12 sites/4 muscle groups); tension headache (30units, 6sites/2muscle groups); LBP (200 units, 8 sites/2 muscle groups); PHN and TN (0, 5-1 unit/cm2 intradermally) and PDN (1-2 unit/cm2 subcutaneous).

Results: The sex ratio (F/M) was 1.3 and the average age was 43.3 years with age limits of 11 and 79 years. It was noted 26% of TN, 23% PDN, 20% migraine, 15% LBP, 11% headache and 5% PHN. The average gain (decrease) on VNS was 4.11 points. The gain was 5.6 points for TN, 5.3 for PHN, 5 for LBP, 4.2 for tension headache and 3.2 for PDN. Migraine attacks decreased from 4.1 to 1.2 per month with a gain of 1.4 points on VNS.

Conclusion: It is evident that BTX has an analgesic effect which has been demonstrated with several clinical studies. Future research should include expanding domains of treatable diseases, doses, injection intervals and complications.

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Pathophysiology of migraine: What does calcitonin gene-related peptide do in early stage of migraine?

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Migraine is a severe, episodic, unilateral headache lasting hours to days and affects an estimated 16% of the population worldwide. Cortical Spreading Depression (CSD) is known to be the substrate of migraine with aura and may also lead to migraine like behavior by potentiation of inflammatory responses. Calcitonin-gene related peptide (CGRP) receptors play a crucial role in mediating the magnitude of CSD in rat cortical slice. However, how central CGRP is involved in early stage of migraine remains far from clear. This study aimed to examine if central CGRP could be induced by CSD and if CGRP and its receptors contribute to CSD genesis and propagation. CSD was induced and monitored both in vitro using intrinsic optical signal and in vivo using electrophysiology approach. Quantitative PCR and ELISA were used to quantify CGRP mRNA and peptide levels. The data demonstrated multiple but not single CSD, significantly increase CGRP mRNA and peptide in discrete regions of ipsilateral cortices and subcortical region. In addition, inhibition of both CGRP and CGRP receptors markedly prolonged CSD latency and reduced CSD magnitude in chick retina and mouse cortical slice, which actions on CSD were blocked by exogenous CGRP. Furthermore, reduction of CSD by CGRP receptor inhibition was also observed in vivo. These findings uncover a previously unknown role of cortical CGRP in mediating CSD, suggesting CGRP contributes to migraine pathophysiology and other CSD associated diseases.

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Efficacy of ultrasound-guided oblique subcostal transversus abdominis plane block after laparoscopic sleeve gastrectomy: A double blind, randomized, placebo controlled study

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Introduction: Pain control in the morbidly obese can be especially challenging because of increased sensitivity to opioid-induced respiratory depression. The subcostal transversus abdominis plane block is associated with a large area of spread (T7-L1).

Aim: The aim of the study was to test the hypothesis that US-guided TAP blocks can reduce opioid consumption during the first 24 h after of laparoscopic sleeve gastrectomy in comparison with port site local anesthetic infiltration and systemic analgesia.

Materials & Methods: Sixty-three ASA II/III adult patients listed for elective laparoscopic sleeve gastrectomy were randomly allocated in one of three groups: Group I (OSTAP) received bilateral OSTAP block. Group II (Local) received local anesthetic infiltration at trocar port sites. Group III (Control) placebo group received TAP block and port site infiltration by same volumes of sterile normal saline. Twenty-four hours postopetrative morphine consumption, the dose of fentanyl (μg) required during surgery, equivalent morphine dose in the recovery unit (PACU) and first morphine dose were recorded. The quality of analgesia is assessed by Visual Analogue Scale for 24 h at rest and movement.

Results: The mean opioid consumptions in PACU showed significant difference between the three groups, P=0.02. The mean 24 h morphine consumption showed statistically significant difference between groups (P value <0.001). Significant differences were found between both OSTAP and local groups with control group (P<0.001) and also between OSTAP and Local groups (P=0.02). Pain score of OSTAP group was significantly lower than local infiltration group at 6 and 4 h at rest and movement, respectively. OSTAP group had faster extubation time than other groups. Postoperative nausea and vomiting were not significant between groups. No signs or symptoms of local anesthetic systemic toxicity or complications were detected.

Conclusion: Oblique subcostal TAP block is a good alternative for providing analgesia during the postoperative period. The block is easily performed using ultrasound guidance. It is safe, provides effective analgesia with significant morphine-sparing effect with reduced side-effects of opioids.

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Multimodal analgesia with pregabalin and dexmedetomidine in morbidly obese patients undergoing laparoscopic sleeve gastrectomy: A prospective randomized double blind placebo controlled study

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Cairo University, Egypt

Background & Objectives: Sleeve gastrectomy has become a popular and effective treatment for morbidly obese patients. The aim of this prospective randomized study was to assess the efficacy of multimodal analgesia using pregabalin and dexmedetomidine in morbidly obese patients undergoing laparoscopic sleeve gastrectomy.

Materials & Methods: After ethical approval, 60 American Society of Anesthesiologists (ASA) physical status II patients were enrolled in this study and allocated randomly into 2 groups: Group A received 75 mg oral pregabalin 2 h before surgery and dexmedetomidine infusion 0.4 lg/kg/h and Group B (control group) received placebo capsule 2 h before surgery and saline infusion intraoperatively. Intraoperative fentanyl consumption, hemodynamics and postoperative opioid consumption, pain scores, level of sedation and any side effects were evaluated.

Results: There was a significant decrease in heart rate, mean arterial blood pressure, pain score, intraoperative fentanyl use, postoperative morphine consumption and nausea verbal rating scale in Group A as compared to Group B. There was a significant increase in sedation score in Group A as compared to Group B.

Conclusions: The combination of preoperative oral pregabalin and intraoperative dexmedetomidine infusion decreased intraoperative fentanyl use and ensured postoperative better pain control and less postoperative opioid consumption.

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The effect of simultaneous application of laser beam and magnet in treatment of intervertebral disc herniation

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Background: Disc herniation is a common complication in the society and it is one of the main reasons for referring to physical medicine and rehabilitation clinics. Despite of various methods proposed for treating this disease, still there is disagreement on success of these methods especially in non-surgical methods, and thus current study aims at determining effect of laser beam and magnet on treatment of intervertebral disc herniation.

Materials & Methods: During a clinical trial study, 80 patients with intervertebral disc herniation underwent a combined package of treatment including magnet, laser beam, PRP and prolotherapy during 6 months.

Results: Average age of patients was 51.25±10.7 with range of 25–71 years. 30 men (37.5%) and 50 women (62.5%) took part in the study. Average weight of patients was 64.3±7.2 with range of 49–79 kg. Highest level of disc herniation was L5–S1 with frequency of 17 cases (21.3%). Disc herniation was severe in 30 cases before treatment, but it reduced to 3 cases after treatment.

Conclusion: This study indicates effect of combined treatment using non-invasive laser beam and magnet therapy on disco genic diseases and mechanical pains of spine is highly effective.

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The role of the endocannabinoid system in a mouse model of ddC-Induced neuropathic pain

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Statement of the Problem: Nucleoside reverse transcriptase inhibitors (NRTIs) are the cornerstone in the treatment of HIV/AIDS. Sometimes, their use is limited by the development of a painful neuropathy, which does not respond well to drugs. However, some HIV patients with painful neuropathy report relief after using cannabis. The aim of this study is to evaluate whether the endocannabinoid system plays a role in NRTI-induced painful neuropathy.

Methodology & Theoretical Orientation: Female BALB/c mice were treated with 25 mg/kg of 2 , 3 -dideoxycytidine (ddC). The expression of the endocannabinoid system molecules was evaluated by real-time RT-PCR in the brain, spinal cord and paw skin at days two, six and nine post ddC administration. The effects of the endocannabinoids, N-arachidonoyl ethanolamine (AEA), 2-arachidonoyl glycerol (2-AG), cannabinoid receptor antagonists, AM 251 and AM 630 on ddC-induced thermal hyperalgesia were evaluated using the hot plate test.

Findings: Mice treated with ddC developed mechanical and cold allodynia, thermal hyperalgesia and chemical hyposensitivity. Mice are sacrificed at a time point when they had developed allodynia, hyperalgesia or hyposensitivity which had increased transcripts of phospholipase C-1beta and acylglycerol kinase in the paw skins and spinal cords but not in the brain. On the other hand, transcripts of fatty acid amide hydrolase and monoacyl glycerol were down regulated in the paw skins and brains but not in the spinal cord. AEA and 2-AG had antihyperalgesic effects against ddC-induced thermal hyperalgesia, but had no effect in naïve mice. The antihyperalgesic activity of AEA was antagonized by AM251 and AM630, whereas the activity of 2-AG was antagonized by AM251 but not by AM630.

Conclusion & Significance: Our results show that ddC induces painful neuropathy, which is associated with dysregulation of the endocannabinoid system. Agonists of cannabinoid receptors could be useful therapeutic agents for the management of NRTI-induced painful sensory neuropathy.

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Hypnosis and paediatric anaesthesia

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Hypnosis is a normal phenomenon where an attentive focal concentration using suggestion and imagination both coupled to a relative suspension of peripheral awareness. Well-prepared children do respond well to hypnosis based on positive and dissociate communication. It is a safe technique which reduces children pain scores and anxiety during preoperative preparation, induction of anaesthesia and can ease postoperative care by reducing post-traumatic stress syndromes. Hypnosis can also be associated to sedation for minor surgical procedures done under local or regional anaesthesia.

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The preventive effect of date palm (Phoenix dactylifera) seed and fruit hydroalcoholic extracts on carrageenan-induced inflammation in male rat's hind paw

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Background & Objective: The side effects of NSAIDS drugs have caused increasing interest of scientists in herbal medicines as alternative treatment. In this study, the anti-inflammatory effect of seed and fruit of date palm hydroalcolic extracts, due to having antioxidants, was studied.

Materials & Methods: In this study, the extracts of date palm seed and fruit were prepared by maceration method in 70% alcohol. Eighty male rats Wistar, divided into 10 groups of 8 in each, 4 groups received different doses (100, 200, 400 and 600 mg/kg) of seed extract and 4 other groups different doses (100, 200, 400 and 600 mg/kg) of fruits extract of the palm, and the positive control aspirin (300 mg/kg) and the negative control group saline (5 ml/kg) via injection intraperitoneally. Half an hour later all animals received 100 µl of 1% carrageenan into the rats' hind paw subcutaneous. The changes in rats paw edema was measured by plethysmometer every hour for 5 hours.

Results: The effect of all of the doses of date palm seed extract on edema were less than aspirin ($P<0.05$). But there was no significant difference between the group that received 400 and 600 mg/kg date palm fruit extract when compared with aspirin group. The dose 400 mg/kg of fruit extract showed the most anti-inflammatory effect and it was assigned as the best dose.

Conclusion: It is likely that with further studies on different model of animals and also on human model the palm fruit extract could be used for pain treatment.

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Effectiveness of a self-management program for joint protection and physical activity for patients with rheumatoid arthritis: A pilot study

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Background: Rheumatoid arthritis is a persistent systemic disease. Self-management skills are important for this patient population; however, a comprehensive rheumatoid arthritis self-management program for patients' day-to-day joint protection and physical activity is limited in Chinese society.

Objectives: The aim of the study was to evaluate self-management for rheumatoid arthritis patients, which focused on joint protection and improving physical activity.

Method: A pilot study with a pretest-posttest design was conducted with 32 adult rheumatoid arthritis patients at a medical center in northern Taiwan from January to July of 2016. Participants received a 6-week intervention (n=15) or usual care (n=17). Measures, at baseline and 12-weeks (outcome), included disease activity, arthritis self-efficacy, quality of life, and rheumatoid arthritis self-management behavior. Participant satisfaction and recommendations regarding the program were also collected. Analysis employed the Mann-Whitney U test.

Results: Outcomes for the intervention group improved significantly for most variables. However, only rheumatoid arthritis self-management behavior was significantly better for the intervention group compared to controls ($p<.05$). The intervention group evaluated the program as satisfactory or very satisfactory; home visits and phone calls scored highest.

Discussion: The self-management program is a feasible means of improving rheumatoid arthritis patients' self-management behavior. A trusting relationship with the researcher was important for home visits, and phone calls were helpful as reminders. These findings will be incorporated in a large-scale study for further analysis of improving outcomes of persons with rheumatoid arthritis.

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Combined effect of baclofen and acamprosate in experimental models of peripheral neuropathic pain in Wistar rats

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Introduction: Neuropathic pain (NP) is defined as pain associated with damage or permanent alteration of the peripheral or central nervous system. Current drug treatment for the management of neuropathic pain associated with various adverse effects. The present study was designed to investigate the combined effect of acamprosate and baclofen in experimental model of peripheral Neuropathic pain in Wistar rats.

Material & Methods: Neuropathic pain was induced by chronic constriction injured (cci) of sciatic nerve in rats. Acamprosate (100 and 200 mg/kg p.o) and baclofen (10 and 20 mg/kg p.o) was given in different groups for 14 days starting on 7th day post sciatic nerve ligation. Further combination of acamprosate (100 mg/kg p.o) and baclofen (10 mg/kg p.o) was also given to one group. On 1st, 3rd, 7th, 14th and 21st day behavioral parameters like mechanical allodynia and thermal hyperalgesia were assessed. Then animals were sacrificed on 22nd day and biochemical parameters (gsh, lpo, catalase, nitrite, sod) were assessed.

Results: Ligation of sciatic nerve significantly induced mechanical allodynia and thermal hyperalgesia with increase in oxidative stress (increase in lpo and nitrite) and decline of anti-oxidant enzyme levels (catalase, sod, gsh) in sciatic nerve homogenate. A camprosate (100 and 200 mg/kg p.o) and baclofen (10and 20 mg/kg p.o) attenuated all the behavioral and biochemical parameters alone and/or combination.

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Evaluation of regional anesthesia procedure in the emergency department and prehospital care: A regional survey

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Introduction: The regional anesthesia (ALR), initially restricted to anesthetists, is underused in emergency medical department, often due to lack of training. 10 years after French recommendations, a regional investigation, was realized to estimate the practice of the ALR of the emergency physicians.

Material & Methods: This descriptive study, multicenter was led during period from January 1st till April 30th, 2012 in France.

Results: We collected 144 responses from 317 physicians in the 46 emergency departments. The rate of participation amounted to 45.4%. 55% doctors had more than 10 years' experience and 70% had an activity in the emergency care and pre hospital care. 71% physicians practiced the ALR, among which 46% were without training. The indications were: Against pain (71%), explorer (60%) or during reduction of fracture or dislocation (52%). The most had not met complications (96%). There was a statistical association between the experiment of the doctor and the practice of the ALR (p=0.01). 72% physicians judged the use of ALR. However, the emergency physicians underlined a lack of training (70%), rare indications (45%), fear (8%) and lack of interest (4%). 89% realized the femoral block respectively and 32%, 20% and 3%, the block of the hand, face and the foot. The majority had a favorable opinion for the learning of the regional anesthesia.

Conclusion: The benefit of regional anesthesia in the emergency units is well established not only due to its effectiveness but also due to its simplicity, ease of use and the lack of overall impact. In spite of the recommendations, it turns out that there is a misunderstanding and a real need for training among the emergency physicians including the young graduates.

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Relationship between pain, social support and socio-economic indicators in individuals with spinal cord injury

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Introduction: Chronic pain is one of the common problems associated with spinal cord injuries (SCI), which causes many complications. For example impairment in daily activities, low quality of life, sleep disorders, depression, anxiety, anger and poor adjustment. The pain usually starts within the first 6 months after injury and is typically resistant to treatment. Researchers now believe that the bio-psychosocial perspective may provide a better understanding of pain in SCI. Therefore, this study intended to evaluate the relationship between pain and demographic, injury characteristics, socio-economic and social support in individuals with spinal cord injury in Iran.

Materials & Methods: The participants were 140 individuals with SCI, 72% men and 28% women, with mean age of 29.4±7.9 years, referred to Brain and Spinal Cord Injury Research Center (BASIR), Tehran University of Medical Sciences, between 2012 and 2013. The Persian version of the Brief Pain Inventory (BPI) was used to measure the pain and the Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support through structured face-to-face interviews in SCI individuals.

Results: About 50.7% complained about having pain, in which 79.3% had bilateral pain. The most common locations of pain were lower limbs and back. The most quality of pain were described as aching and tingling (74.4%), followed by pressure, coldness and feeling electric shock sensations. The frequency of pain in individuals with paraplegia was higher than tetraplegia, and in individuals with incomplete was higher than complete injury. Patients with a medium level of education had the least pain compared to high and low level of education. SCI individuals with good economic situation reported higher frequency of having pain. There was no significant relationship between pain and social support.

Conclusion: These findings revealed the importance of socioeconomic factors such as economic situation and educational level in understanding chronic pain in people with SCI and provide further support for the bio-psychosocial model.

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