Editorials

2049 Daniel B. Carr, MD, DABPM, FFPMANZCA (Hon)
Evidence-Based Pain Medicine: Inconvenient Truths

2051 Sheri P. Silfies, PT, PhD, Jennifer M.C. Vendemia, PhD, Paul F. Beattie, PT, PhD, Jill Campbell Stewart, PT, PhD, and Max Jordon, DPT
Changes in Brain Structure and Activation May Augment Abnormal Movement Patterns: An Emerging Challenge in Musculoskeletal Rehabilitation

Perspective & Commentary

2055 Nikolai Bogduk, MD, Phd, DSc
A Commentary on Appropriate Use Criteria for Sacroiliac Pain

General Section

Original Research Articles

2058 Calia A. Torres, MA, Beverly E. Thorn, PhD, Shweta Kapoor, MD, PhD, and Colette DeMonte, PsyD
An Examination of Cultural Values and Pain Management in Foreign-Born Spanish-Speaking Hispanics Seeking Care at a Federally Qualified Health Center
Disparities in pain care might be driven by patients’ dissatisfaction with their quality of care, including their relationship with providers. Among foreign-born Spanish-speaking Hispanics, these might be influenced by their unfamiliarity with a different medical system from their home country and expectations for a different “type” of medical encounter. To address disparities, this study provides patients’ perspectives to explore cultural factors impacting medical care for pain management and satisfaction with care.

2070 Ivan B. Lin, PhD, Kim Ryder, Cert II, Juli Coffin, PhD, Charmaine Green, MA, Eric Dalgety, Cert III, Brian Scott, Cert IV, Leon M. Straker, PhD, Anne J. Smith, PhD, and Peter B. O’Sullivan, PhD
Addressing Disparities in Low Back Pain Care by Developing Culturally Appropriate Information for Aboriginal Australians: “My Back on Track, My Future”
Clinical guidelines recommend developing low back pain (LBP) information that is culturally appropriate, however little is known of how this may be achieved. This study outlines: a) the processes used to develop culturally appropriate LBP information for Aboriginal Australians, b) a preliminary study comparing the information (“My Back on Track, My Future”) to recommended care (“Back Book”). Similar processes could be used with other populations currently under-served by existing approaches to care.

Spine Section

Review Article

2081 John MacVicar, MBChB, MPainMed, D. Scott Kreiner, MD, Belinda Duszynski, BS, and David J. Kennedy, MD
Appropriate Use Criteria for Fluoroscopically Guided Diagnostic and Therapeutic Sacroiliac Interventions: Results from the Spine Intervention Society Convened Multispecialty Collaborative
The Spine Intervention Society convened a multisociety, multidisciplinary collaborative effort to develop appropriate use criteria (AUC) addressing fluoroscopically-guided diagnostic and therapeutic sacroiliac interventions. The objectives of this AUC are: 1) to provide physicians with a tool to assist in diagnosing and treating sacroiliac joint and posterior sacroiliac complex pain utilizing image-guided injections and radiofrequency procedures, and 2) to define for payers what is typically appropriate use of image-guided injections and radiofrequency procedures for these patients.
EDUCATION & TRAINING SECTION

Special Article

2096 Nikolai Bogduk, MD, DSc, David J. Kennedy, MD, Yakov Vorobeychik, MD, and Andrew Engel, MD

Guidelines for Composing and Assessing a Paper on Treatment of Pain

When submitting articles on pain treatment, authors need to include several critical features in their manuscript. These are features that perceptive readers will want to see, if the data and arguments are to be convincing.

PAIN & AGING SECTION

Original Research Article

2105 Stefan Lautenbacher, PhD, Elizabeth L. Sampson, MD, Sonja Pähl, MA, and Miriam Kunz, PhD

Which Facial Descriptors Do Care Home Nurses Use to Infer Whether a Person with Dementia Is in Pain?

The present study aimed at identifying key observations that are used by caregivers (nurses for the elderly) in nursing homes when inferring that a patient with dementia is in pain and when estimating how strong the pain is. Caregivers inference of pain in patients with dementia was mainly based on anatomical descriptors like “frowning” and “narrowed eyes” and indicators of emotional arousal like “looking tense” and looking frightened.

PRIMARY CARE & HEALTH SERVICES SECTION

Original Research Article

2116 Rosa Esteve, PhD, Rebeca Bendayan, PhD, Alicia Eva López-Martínez, PhD, and Carmen Ramírez-Maestre, PhD

Resilience and Vulnerability Factors When Pain is Acute as Predictors of Disability: Findings From a Two-Year Longitudinal Study

To investigate the predictive power of resilience and vulnerability factors in relation to pain-related disability, 222 primary care patients with acute back pain were followed by successive assessments at 6, 12, 18, and 24 months. Patients with high levels of pain-related disability, pain intensity, and fear-avoidance beliefs are at risk of developing back pain-related disability.

PSYCHOLOGY, PSYCHIATRY, IMAGING & BRAIN NEUROSCIENCE SECTION

Original Research Article

2126 Leeana Aarthi Bagwath Persad, MSc, Peter Rowland Kamerman, PhD, and Antonia Louise Wadley, PhD

Predictors of Cold and Pressure Pain Tolerance in Healthy South African Adults

This was the first assessment in a sub-Saharan African population of predictors of cold and pressure pain tolerance and also of beliefs about acceptance of pain expression. Despite a different cultural and social background from US and European cohorts, we saw similar patterns of sex and ethnic differences in cold and pressure pain tolerance in an African cohort. Traditional psychosocial predictors of pain sensitivity were only weak predictors of pain tolerance and acceptance of pain expression.

Review Article

2138 Anthony M. Harrison, PhD, Whitney Scott, PhD, Louise C. Johns, PhD, DClinPsy, Eric M.J. Morris, PhD, and Lance M. McCracken, PhD

Are We Speaking the Same Language? Finding Theoretical Coherence and Precision in “Mindfulness-Based Mechanisms” in Chronic Pain

Several theoretical challenges may inhibit the progress of “mindfulness-based interventions” (MBIs) in chronic pain: including lack of clarity surrounding the mindfulness construct itself, the growth of purported underlying mechanisms arising from different theories, and limited evidence for the mechanisms through which MBIs work. This review provides a critique of existing theories of mindfulness to understand and treat chronic pain, and summarises available evidence for a contextual behavioral theory of “mindfulness”, psychological flexibility.

OPIOIDS & SUBSTANCE USE DISORDERS SECTION

Original Research Articles

2152 Mark Beitel, PhD, Lindsay Oberleitner, PhD, Marissa Kahn, MSW, Robert D. Kerns, PhD, Christopher Liong, BA, Lynn M. Madden, MPA, Joel Ginn, BA, and Declan T. Barry, PhD

Drug Counselor Responses to Patients’ Pain Reports: A Qualitative Investigation of Barriers and Facilitators to Treating Patients with Chronic Pain in Methadone Maintenance Treatment

30 drug counselors were interviewed individually about their responses to patients’ pain reports. Barriers and facilitators to treating methadone-maintained patients with pain emerged. Future trainings of drug counselors might benefit from addressing these barriers and facilitators.

continued.
A Novel Chronic Opioid Monitoring Tool to Assess Prescription Drug Steady State Levels in Oral Fluid
Well-established pharmacokinetic models were utilized to generate oral fluid steady state concentration ranges to assess the interpretive value of the alternative matrix to monitor steady state plasma oxycodone levels. This study describes the development of a novel prescription drug monitoring tool called Comprehensive Oral fluid Rx Evaluation™ (CORE). CORE is the first drug monitoring method to correlate oral fluid drug concentrations to steady state blood plasma drug levels, providing patient specific insight surrounding chronic dosing.

METHODOLOGY, MECHANISMS & TRANSLATIONAL RESEARCH SECTION

Original Research Article

Hydrocodone is More Effective than Morphine or Oxycodone in Suppressing the Development of Burn-Induced Mechanical Allodynia
Unrelieved burn injury pain is a significant public health problem. Opioids are commonly used in the course of burn pain management. This study compared the ability of morphine, oxycodone, and hydrocodone to suppress the development of burn-induced mechanical allodynia and reduce pain sensitivity. It demonstrated that hydrocodone is effective in suppressing the development of burn-induced mechanical allodynia, while both morphine and oxycodone had minimal effects.

NEUROMODULATION & INTERVENTION SECTION

Original Research Article

Application of Virtual Navigation with Multimodality Image Fusion in Foramen Ovale Cannulation
Foramen ovale cannulation was performed with virtual navigation and multimodal imaging. All foramina were successfully cannulated with spiral CT and ultrasound data. Cannulation under virtual navigation is feasible, safe, and relatively inexpensive.

NEUROPATHIC PAIN SECTION

Original Research Articles

Changes in the Skin Conductance Monitor as an End Point for Sympathetic Nerve Blocks
Lumbar sympathetic blocks are commonly performed for diagnostic and therapeutic purposes. This preliminary study suggests that the skin conductance monitor is a more reliable and rapid response indicator of a successful sympathetic blockade when compared to traditional monitors such as clinical evaluation, temperature and pulse amplitude monitoring in the affected limb. As a non-invasive monitor with easy clinical applicability, it has potential to improve procedural accuracy and efficiency during performance of lumbar sympathetic blocks.

Efficacy of Mirogabalin (DS-5565) on Patient-Reported Pain and Sleep Interference in Patients with Diabetic Neuropathic Pain: Secondary Outcomes of a Phase II Proof-of-Concept Study
Mirogabalin is a novel, preferentially selective a2d-1 ligand intended for treatment of pain associated with fibromyalgia and neuropathic pain. In a randomized, double-blind, placebo-controlled and active comparator (pregabalin)-controlled, adaptive proof-of-concept phase 2 study in patients with diabetic peripheral neuropathic pain (DPNP), mirogabalin significantly improved pain-associated sleep interference at the 15-, 20-, and 30-mg/day dose levels compared with placebo. Baseline average daily sleep interference score (ADSS) and average daily pain score (ADPS) values at baseline were strongly correlated (R² = 0.4407), as were mean change from baseline in ADSS and ADPS values at week 5 (R² = 0.6694). Results support the effectiveness of mirogabalin in improving patient-reported pain and sleep interference in patients with DPNP.

ACUTE & PERIOPERATIVE PAIN SECTION

Original Research Article

The Influence of Type of Anesthesia, Perioperative Pain, and Preoperative Health Status on Chronic Pain Six Months After Thoracotomy—A Prospective Cohort Study
The influence of type of anesthesia, perioperative pain, and preoperative health status on chronic pain 6 months after thoracotomy – a prospective cohort study.
Comparison Between Chronic Migraine and Temporomandibular Disorders in Pain-Related Disability and Fear-Avoidance Behaviors

Differences between the CM group and the mixed TMD group were found in craniofacial pain and disability, pain catastrophizing and headache impact, but they were similar for pain intensity, neck disability and kinesiophobia. Neck disability and kinesiophobia were covariates of craniofacial pain and disability (34% of variance) for mixed TMD. In the CM group, neck disability was a predicative factor for headache impact (19.3% of variance).

Primary Motor Cortex Organization Is Altered in Persistent Patellofemoral Pain

Primary motor cortex organization is altered in people with patellofemoral pain compared with pain-free controls. Altered organization is characterised by reduced map volumes, fewer discrete map peaks, greater overlap and an anterior shift in the representations of the quadriceps muscles. These data have relevance for our understanding of the pathophysiology of patellofemoral pain and for the design of treatments that aim to target M1 in this condition.

Immediate Pain Relief in Adhesive Capsulitis by Acupuncture—A Randomized Controlled Double-Blinded Study

Sixty volunteers with primary AC were randomly assigned to acupuncture treatment with Press-Tack Needles compared to Press-Tack Placebos in a patient and observer-blinded placebo-controlled study. Immediate pain relief obtained with a specific distal needling concept with Press-Tack Needles was superior to Press-Tack Placebos. The follow-up clinical observation with Classical Needle Acupuncture showed that conservative therapy integrating acupuncture can positively influence the time course of the recovery process in AC. Therefore, the results achieved with Press-Tack Needles and Press-Tack Placebos can be transferred to Classical Needle Acupuncture, thus offering an effective option for double-blind placebo-controlled studies with acupuncture.

Are Gadolinium-Based Contrast Media Safe Alternatives for Spine Procedures?

Pain Management with Functional Activity in Veterans: Time for a Paradigm Shift

Vegetable Garden as Therapeutic Horticulture for Patients with Chronic Pain

Novel Method for Precise Multilevel Injection Through a Single Skin Puncture: Entry over Target Fluoroscopic Technique

Reliability and Accuracy of MRI Laminar Angle Measurements to Determine Intraprocedural Contralateral Oblique View Angle for Cervical or Thoracic Interlaminar Epidural Steroid Injections—Safety Before Accuracy

Response to Drs. Gill and Simopoulos