Official Journal of the American Academy of Pain Medicine, the Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists and of the Spine Intervention Society


EDITORIAL
1001 Thomas M. Larkin, MD and Steven P. Cohen, MD
Drug Marketing and Prescribing Patterns: Challenges Facing Physicians Entering the New Trump Era of Health Care: Are There Parallels with the Canadian Experience?

1004 Nikolai Bogduk
Fact Finders—Clinical Perspectives

PRESIDENT’S MESSAGE
1005 Steven P. Stanos, DO
Stemming the Tide of the Pain and Opioid Crisis: AAPM Reaffirms Its Commitment to Multidisciplinary Biopsychosocial Care and Training

GENERAL SECTION

Original Research Articles
1007 Hilarie Tardif, PhD, Carolyn Arnold, FFPMANZCA, Chris Hayes, FFPMANZCA, M Med (PMgt), and Kathy Eagar, PhD
Establishment of the Australasian Electronic Persistent Pain Outcomes Collaboration
A chronic pain treatment outcomes registry, the electronic Persistent Pain Outcomes Collaboration (ePPOC), has been established in Australasia. ePPOC’s goals are to evaluate treatment of persistent pain, establish a benchmarking system to drive quality improvement and coordinate a research program to address areas of interest within the national and international pain management sector. This paper describes the development and the first phase implementation of the registry.

1019 Herman Kwok, PharmD, Wayne Khuu, MPH, Kimberly Fernandes, MSc, Diana Martins, MSc, Mina Tadrous, PharmD, PhD, Samantha Singh, BSc, David N. Juurlink, MD, PhD, and Tara Gomes, MHSc
Impact of Unrestricted Access to Pregabalin on the Use of Opioids and Other CNS-Active Medications: A Cross-Sectional Time Series Analysis
Access to pregabalin via Ontario’s public drug insurance program was expanded to an unrestricted model on April 1, 2013 from a prior authorization model. This study aims to evaluate the impact of expanded access to pregabalin on patterns of prescribing and drug use in Ontario and to identify whether individuals newly initiating pregabalin following the policy change were being treated for unapproved indications or in combinations with other medications that may be unsafe.

SPINE SECTION

Original Research Article
1027 Jatinder Gill, MD, Jyotsna Nagda, MD, Moris Aner, MD, and Thomas Simopoulos, MD
Cervical Epidural Contrast Spread Patterns in Fluoroscopic Antero-Posterior, Lateral, and Contralateral Oblique View: A Three-Dimensional Analysis
This study examined a three dimensional analysis of cervical contrast spread patterns in 24 patients undergoing therapeutic cervical or cervico-thoracic epidural steroid injection with fluoroscopic guidance.

continued.
EDUCATION & TRAINING SECTION

**Review Article**

1040 Judy Watt-Watson, RN, MSc, PhD, Leila Lax, BA, BScAAM, MEd, PhD, Robyn Davies, BHScPT, MAppSc, Sylvia Langlois, MScOT, Jon Oskarsson, RN, MN, and Lalitha Raman-Wilms, BSc(Phm), PharmD, FCSHP

*The Pain Interprofessional Curriculum Design Model*

The Pain Interprofessional Curriculum Design Model is based on IASP curricula and related core competencies relevant to all health science students at the prelicensure (entry-to-practice) level. The Model is based on the University of Toronto experience and provides components that are dynamic, competency-based, interrelated and collaborative. Key questions and design components ensure relevance to the context where it is being applied. The Model can be applied to case development and evaluation as well.

PAIN & AGING SECTION

**Original Research Article**

1049 Sean D. Rundell, DPT, PhD, Karen J. Sherman, PhD, MPH, Patrick J. Heagerty, PhD, Charles N. Mock, MD, PhD, MPH, Nathan J. Dettori, MD, Bryan A. Comstock, MS, Andrew L. Avins, MD, MPH, Srdjan S. Nedeljkovic, MD, David R. Nerenz, PhD, and Jeffrey G. Jarvik, MD, MPH

*Predictors of Persistent Disability and Back Pain in Older Adults with a New Episode of Care for Back Pain*

We performed a prospective cohort study of older adults with new visits for back pain. We examined baseline demographics, health and back pain characteristics as predictors of persistent disability and back pain and found that many predictors in older adults were similar to those for younger populations.

PRIMARY CARE & HEALTH SERVICES SECTION

**Brief Research Report**

1063 Gillian J. Leichtling, BA, Jessica M. Irvine, MS, Christi Hildebran, LMSW, Deborah J. Cohen, PhD, Sara E. Hallvik, MPH, and Richard A. Deyo, MD, MPH

*Clinicians’ Use of Prescription Drug Monitoring Programs in Clinical Practice and Decision-Making*

This qualitative study consisted of semi-structured telephone interviews with clinicians in Oregon who use the PDMP. Clinicians described how they use, interpret, and integrate PDMP profiles with other information in making clinical decisions. Variability was found in consistency of PDMP use, and in prescribing and discharge decisions in response to worrisome PDMP profiles with existing patients on long-term opioids.

PSYCHOLOGY, PSYCHIATRY, IMAGING & BRAIN NEUROSCIENCE SECTION

**Original Research Article**

1070 Grace Huang, MD, Thomas G. Travison, PhD, Robert R. Edwards, PhD, and Shehzad Basaria, MD

*Effects of Testosterone Replacement on Pain Catastrophizing and Sleep Quality in Men with Opioid-Induced Androgen Deficiency*

Testosterone replacement in men with chronic pain and opioid-induced androgen deficiency improves pain perception and pain tolerance, suggesting the role of testosterone as an adjunct in enhancing the potency of opioids in these patients. Given the evidence that greater degree of catastrophizing and sleep disturbance interfere with efficacy of pharmacologic treatment for chronic pain, it was important to determine whether the improvement of pain perception is mediated via modulation of catastrophizing or sleep quality. This study investigates the effects of testosterone administration on pain catastrophizing and sleep quality in men with opioid-induced androgen deficiency.

OPIOIDS, SUBSTANCE ABUSE & ADDICTIONS SECTION

**Original Research Articles**

1077 Beatrice Setnik, PhD, Almasa Bass, PharmD, Candace Bramson, MD, Naama Levy-Coopeeman, PhD, Bimal Malhotra, PhD, Kyle Matschke, MAS, Pierre Geoffroy, MD, Kenneth W. Sommerville, MD, and Gernot Wolfram, MD

*Abuse Potential Study of ALO-02 (Extended-Release Oxycodone Surrounding Sequestered Naltrexone) Compared with Immediate-Release Oxycodone Administered Orally to Nondependent Recreational Opioid Users*

An abuse potential study of an extended-release, abuse-deterrent oxycodone/naltrexone formulation, ALO-02, in recreational opioid users indicates that this formulation has a lower abuse potential when taken orally (either crushed or intact) compared with crushed immediate-release oxycodone while being generally safe and well-tolerated.
Cigarette Smoking Status and Receipt of an Opioid Prescription Among Veterans of Recent Wars

This study aims to examine whether Veterans of Operations Enduring Freedom/Iraqi Freedom/New Dawn (OEF/OIF/OND) who smoke are more likely to receive an opioid prescription than non-smokers, adjusting for current pain intensity. Cross-sectional analysis of Veterans who visited Veterans Health Administration primary care clinic between 2001-2012 was completed. Current smoking [OR=1.56] and former smoking [OR=1.27] were associated with a higher likelihood of receipt of an opioid prescription compared to never smoking, after controlling for other covariates.

METHODOLOGY, MECHANISMS & TRANSLATIONAL RESEARCH SECTION

Original Research Article

Assessment of Patient-Reported Outcome Instruments to Assess Chronic Low Back Pain

A review of existing patient-reported outcome (PRO) instruments with potential for use in supporting a label claim for treatment for chronic low back pain (cLBP) was conducted. Of 13 selected instruments, none fulfilled criteria provided in US Food & Drug Administration guidelines for PRO instrument development. There is an unmet need for a content-relevant validated PRO measure to specifically evaluate cLBP-related symptoms and impacts, and for use in clinical trials to support a label claim.

NEUROMODULATION & INTERVENTION SECTION

Review Article

Radiofrequency Ablation in Coccydynia: A Case Series and Comprehensive, Evidence-Based Review

Coccydynia is a condition with a multitude of causes and ill-defined management. In this report, we describe the treatment of a series of 12 patients who received conventional or pulsed radiofrequency for coccydynia. We also review the conservative, interventional and surgical management of this condition.

NEUROPATHIC PAIN SECTION

Original Research Article

Predictors of Responsiveness to Bisphosphonate Treatment in Patients with Complex Regional Pain Syndrome Type I: A Retrospective Chart Analysis

Complex regional pain syndrome type I is a severe painful and disabling disease with limited evidence for the effectiveness of any therapeutic approach. Bisphosphonates appear to be a therapeutic strategy with convincing evidence but it is unknown if their efficacy is influenced by patient and/or disease characteristics. Among 194 patients, the overall therapeutic response rate was 71.6%. Early disease onset, fracture as a predisposing event, and a “warm” disease subtype were predictors of responsiveness.

MUSCULOSKELETAL SECTION

Original Research Article

Acute Low Back Pain? Do Not Blame the Weather—A Case-Crossover Study

This study provides very clear evidence that factors thought to influence musculoskeletal pain such as precipitation, air pressure, wind speed and relative humidity do not increase the risk of a back pain episode. While we found that higher temperature increased odds of back pain onset; the increase in risk is very small and unlikely to be clinically important.

Brief Research Report

The Association Between Musculoskeletal Pain and Circulating Ornithine: A Population-Based Study

Based on the findings from previous clinical studies we hypothesized that ornithine levels are different among subjects with pain compared with other subjects in the population. In this population-based study, we analyzed the concentrations of glutamic acid, ornithine, citrulline, arginine, proline, and spermidine in the subjects with no pain, non-persistent pain, and persistent pain. Ornithine levels were elevated in the subjects with persistent pain.
The Combination of IV and Perineural Dexamethasone Prolongs the Analgesic Duration of Intercostal Nerve Blocks Compared with IV Dexamethasone Alone

It is common practice to utilize either systemic or perineural steroids to prolong a local anesthetic nerve block. This prospective randomized double blind study evaluates the combination of systemic and perineural steroids compared to systemic alone for intercostal nerve blocks for post-VATS pain. PFT’s were used as objective measures of efficacy.

Cardiovascular Risk Factors in Cluster Headache

We analysed not only the blood pressure pattern, but also laboratory and structural parameters, to determine whether cardiovascular risk also appears to be combined with cluster headache (CH) as occurs in migraine. In CH we found a higher prevalence of a pattern of non-dipping of nocturnal blood pressure and the pathological ankle-brachial pressure index and that a high percentage of CH patients present intima-media thickness values above 75th percentile.

Massage Therapy and Quality of Life in Osteoarthritis of the Knee: A Qualitative Study

In a qualitative study of adults who previously participated in a dose-finding clinical trial of massage therapy for osteoarthritis of the knee, three salient themes emerged. Participants discussed 1) relaxation effects, 2) improved quality of life associated with receiving massage therapy, and 3) the accessibility of massage therapy in treating osteoarthritis.
LETTERS TO THE EDITOR

1195 Gerard A. Malanga, MD

1196 Monica Rho, MD, Alejandra Camacho-Soto, MD, and Abby Cheng, MD
Response to Letter by Dr. Malanga

1197 Gregory E. Lutz, MD
Increased Nuclear T2 Signal Intensity and Improved Function and Pain in a Patient One Year After an Intradiscal Platelet-Rich Plasma Injection

1199 Anis Dizdarevic, MD and Nicholas Bremer, MD
Cervical Spinal Cord Stimulation with Concomitant Serotonin Norepinephrine Reuptake Inhibitor Therapy Leading to the Serotonin Syndrome

1202 Xiulu Ruan, MD, Srinivas Chiravuri, MD, and Alan D. Kaye, MD, PhD
FDA Approval of Extended-Release Oxycodone for Children with Severe Pain: A Step Forward

1204 Kelly Kniprath, DNP and Mustafa Farooque, MD
Drastic Weight Reduction Decrease in Epidural Fat and Concomitant Improvement of Neurogenic Claudicatory Symptoms of Spinal Epidural Lipomatosis