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Providing High-Quality Pain Care for Veterans Means Considering Gender Effects
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Achieving Meaningful Success
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Ethical Conundrums in Pain Medicine: The Intersection of Industry Sponsorship, Fee-for-Service Interventions, and Access to Care

SPINE SECTION
Original Research Article
1631 Zachary L. McCormick, MD, Marc Korn, MD, Rajiv Reddy, MD, Austin Marcolina, BS, David Dayanim, MD, MS, MHA, Ryan Mattie, MD, Daniel Cushman, MD, Meghan Bhave, MD, Robert J. McCarthy, PharmD, Dost Khan, MD, Geeta Nagpal, MD, and David R. Walega, MD
Cooled Radiofrequency Ablation of the Genicular Nerves for Chronic Pain due to Knee Osteoarthritis: Six-Month Outcomes
Genicular nerve radiofrequency ablation (RFA) has been introduced as a treatment option for patients who have failed to respond to conservative pain management of knee osteoarthritis (OA) who are poor surgical candidates or wish to avoid TKA. This study aimed to determine outcomes of cooled radiofrequency ablation (C-RFA) of the genicular nerves for treatment of chronic knee pain due to osteoarthritis (OA). Genicular C-RFA demonstrated a success rate of 35% based on a robust combination of outcome measures and a success rate of 50% when using the minimal clinically important change in knee pain. Report of >80% relief from diagnostic blocks and duration of pain <5 years are associated with high accuracy in predicting treatment success.

Technical Note
1642 Daisuke Kurosawa, MD, Eiichi Murakami, MD, PhD, and Toshimi Aizawa, MD, PhD
Fluoroscopy-Guided Sacroiliac Intraarticular Injection via the Middle Portion of the Joint
Sacroiliac intraarticular injection via the caudal one-third portion of the joint is occasionally impossible for anatomical reasons. We describe a technique that can be performed via the middle portion of the joint. The technique was successful in gaining access to the joint in 80 of 100 joints. This technique can help overcome the difficulties of the conventional technique.

PAIN & AGING SECTION
Original Research Article
1649 Justina Yat Wa Liu, RN, PhD and Doris Y.P. Leung, BSc, MPhil, PhD
Pain Treatments for Nursing Home Residents with Advanced Dementia and Substantial Impaired Communication: A Cross-Sectional Analysis at Baseline of a Cluster Randomized Controlled Trial
The major finding in this study is that the participants’ cognition status and their ability to communicate have an interaction effect that is associated with the use of pain medications. Participants with a higher ability to communicate and fewer pain locations were found to be more likely to receive pain medications, with the impact of communication ability being greater among participants with better cognitive status than among those with poor cognitive status.

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PSYCHOLOGY, PSYCHIATRY, IMAGING & BRAIN NEUROSCIENCE SECTION

Original Research Articles

1658 Jennifer C. Naylor, PhD, H. Ryan Wagner, PhD, Mira Brancu, PhD, Megan Shepherd-Banigan, PhD, Eric Elbogen, PhD, Michelle Kelley, PhD, Teresa Fecteau, PhD, Karen Goldstein, MD, Nathan A. Kimbrel, PhD, Christine E. Marx, MD, VA Mid-Atlantic MIRECC Work Group, VA Mid-Atlantic MIRECC Women Veterans Work Group, and Jennifer L. Strauss, PhD

Self-Reported Pain in Male and Female Iraq/Afghanistan-Era Veterans: Associations with Psychiatric Symptoms and Functioning

Results show that male and female Iraq/Afghanistan-era veterans reporting similar levels of pain have similar psychiatric and functional impairments. Results also confirm prior reports that female veterans endorse higher levels of pain compared to male veterans, and as severity of pain increases for both male and female veterans, so does psychiatric comorbidity and function. Overall, these results have important implications for the assessment and treatment of pain-related disorders and psychiatric comorbidities in Iraq/Afghanistan era veterans.

1668 Ivan S.K. Thong, MSc, Gabriel Tan, PhD, Tammy Y.C. Lee, BA, and Mark P. Jensen, PhD

A Comparison of Pain Beliefs and Coping Strategies and Their Association with Chronic Pain Adjustment Between Singapore and United States

This study examined empirically the generalizability of pain beliefs and coping strategies research to the Singapore population. The findings provide further support for the potential influence of culture on how individuals view and cope with pain. However, the many similarities found in direction and strength of the associations between beliefs/coping strategies and measures of pain/dysfunction provide preliminary support for the appropriateness of the use of CBT developed in the USA with the Singapore population.

1679 Su-Yin Yang, MSc, Lance M. McCracken, PhD, and Rona Moss-Morris, PhD

Psychological Treatment Needs for Chronic Pain in Singapore and the Relevance of the Psychological Flexibility Model

This study aimed to (a) assess the psychological treatment needs and treatment delivery preferences in a sample of people with chronic pain in Singapore, and (b) to explore potential relevance of the psychological flexibility (PF) model for this group. Meeting patients’ needs at low cost, providing proof of treatment success and incorporating elements of PF, are features to consider for future treatment development.

OPIOIDS & SUBSTANCE USE DISORDERS SECTION

Original Research Article

1695 Lynn R. Webster, MD, Michael D. Smith, PharmD, John Lawler, BS, Karsten Lindhardt, PhD, and Jeffrey M. Dayno, MD

Human Abuse Potential of an Abuse-Deterrent (AD), Extended-Release (ER) Morphine Product Candidate (Morphine-ADER Injection-Molded Tablets) vs Extended-Release Morphine Administered Intranasally in Nondependent Recreational Opioid Users

The intranasal human abuse potential of morphine abuse-deterrent (morphine-ADER-IMT), extended-release-injection molded tablets, a novel formulation of extended-release (ER) morphine with features designed to reduce accidental and intentional misuse and abuse was compared with a currently marketed, non-abuse-deterrent formulation of morphine ER. Following manipulation and intranasal administration, drug liking and other key indicators of abuse potential, were lower in participants who snorted manipulated morphine-ADER-IMT compared with participants who snorted manipulated ER morphine.

Brief Research Report

1706 Adam R. Toth, DO, Carl J. Possidente, PharmD, FASHP, Linda M. Sawyer, RPh, Mark A. DiParlo, RPh, and Gilbert J. Fanciullo, MD, MS


This study reviews opioid prescribing patterns nationally, regionally across several northern New England states, and on an institutional level, over a two year period between 2013 and 2014. Our analysis of a large national prescription database suggests a plateauing of the previously-described upward trajectory in prescription opioid utilization. Data from several New England states suggests that state and national initiatives may be having an impact toward more judicious and safe opioid prescribing.

METHODOLOGY, MECHANISMS & TRANSLATIONAL RESEARCH SECTION

Original Research Article

1715 Tali Benromano, MSc, Chaim G. Pick, PhD, Yelena Granovsky, PhD, and Ruth Defrin, PhD

Increased Evoked Potentials and Behavioral Indices in Response to Pain Among Individuals with Intellectual Disability

Data on the sensitivity and reactivity to pain of individuals with intellectual disability is inconsistent, perhaps due to the reliance on subjective measurements. Here we show, using pain evoked potentials as well as self-reports and facial expressions analysis, that compared to controls, individuals with intellectual disability have increased pain responsiveness but responsiveness may be delayed.

continued.
NEUROMODULATION & INTERVENTION SECTION

Original Research Article

1731 Andrea Tinnirello, MD, FIPP, Sandra Barbieri, MD, Manuel Todeschini, MD, and Maurizio Marchesini, MD

Conventional (Simplicity III) and Cooled (SInergy) Radiofrequency for Sacroiliac Joint Denervation: One-Year Retrospective Study Comparing Two Devices

This retrospective study compares two radiofrequency (RF) devices, Simplicity III (conventional RF) and SInergy (cooled RF), which are specifically designed to denervate the sacroiliac joint (SIJ). 43 patients were followed up to 1 year post procedure. Average SInergy group NRS and ODI scores were consistently less than those in the Simplicity III cohort at each post-RF denervation follow-up, and such differences were statistically significant at 6 and 12 months suggesting that cooled RF provides greater and more durable analgesia and disability relief for SIJ derived pain.

NEUROPATHIC PAIN SECTION

Original Research Articles

1745 Ayman A. Youssef, MD and Amr M. Aborahma, MD

The Preventive Value of Epidural Calcitonin in Patients with Lower Limb Amputation

Post-amputation pain is prevalent after limb amputation. Calcitonin may effectively relieve many neuropathic pain states. The epidural calcitonin improved the grade of phantom pain and reduced the incidence of alldynia and hyperalgesia in patients undergoing lower limb amputation.

1752 Jian Li, MD, Qing Ouyang, MD, Cheng-wen Chen, MS, Qian-bo Chen, MS, Xiang-nan Li, MS, Zheng-hua Xiang, PhD, and Hong-bin Yuan, MD

Neuron-Derived ADAM10 Production Stimulates Peripheral Nerve Injury–Induced Neuropathic Pain by Cleavage of E-Cadherin in Satellite Glial Cells

The present study aimed to characterize the cellular source of ADAM10 after spinal nerve ligation (SNL) surgery and to investigate its mechanistic role in the development of neuropathic pain. Taking our in vivo and in vitro results together, we suggest that E-cadherin cleavage in SGCs by neuronal-derived ADAM10 plays a role in the development of neuropathic pain after peripheral nerve injury. Loss-of-function interference of the E-cadherin/β-catenin complex in SGCs induces expression of pain-related molecules.

MUSCULOSKELETAL PAIN SECTION

Original Research Articles

1767 Mary A. Driscoll, PhD, Diana Higgins, PhD, Andrea Shamaskin-Garroway, PhD, Amanda Burger, PhD, Eugenia Buta, PhD, Joseph L. Goulet, PhD, Alicia Heapy, PhD, Robert D. Kerns, PhD, Cynthia A. Brandt, MD, MPH, and Sally G. Haskell, MD

Examining Gender as a Correlate of Self-Reported Pain Treatment Use Among Recent Service Veterans with Deployment-Related Musculoskeletal Disorders

This study examines gender differences in self-reported use of opioids, interventional pain treatments, rehabilitation therapies, and complementary and integrative health (CIH) services for chronic pain treatment both within and outside of the Veterans Health Administration in a sample of veterans who served in support of recent conflicts. Though there were no gender differences in self-reported use of any of these modalities, findings suggested high rates of pain specialty care utilization, particularly non-pharmacologic interventions among both men and women.

1778 Pablo de la Coba, Stephen Bruehl, María Moreno-Padilla, and Gustavo A. Reyes del Paso

Responses to Slowly Repeated Evoked Pain Stimuli in Fibromyalgia Patients: Evidence of Enhanced Pain Sensitization

A slowly repeated evoked pain stimuli (SREP) laboratory protocol was administered to twenty-four fibromyalgia patients and 24 healthy participants consisting of a single series of 9 low-intensity pressure stimuli of 5s duration and 30s inter-stimulus interval to evaluate pain responsiveness in fibromyalgia. Subjective intensity was assessed with a VAS. SREP demonstrated higher specificity in discriminating fibromyalgia and control groups relative to pain threshold or tolerance. SREP appears to be distinct from traditional evoked pain measures.

ACUTE & PERIOPERATIVE PAIN SECTION

Original Research Article

1787 Courtney D. Jensen, PhD, Jamie T. Stark, PhD, Lewis L. Jacobson, MD, Jan M. Powers, PhD, Michael F. Joseph, PhD, Jeffrey M. Kinsella-Shaw, PhD, and Craig R. Denegar, PhD

Improved Outcomes Associated with the Liberal Use of Thoracic Epidural Analgesia in Patients with Rib Fractures

Mortality among rib fracture patients can be as high as 10%. Effective pain management is critical to survival. There are several modes of pain management available. In this retrospective study, when controlling for age, use of mechanical ventilation, and injury severity among 965 rib fracture patients who were candidates to receive thoracic epidural analgesia, the use of this treatment was associated with a 97% reduction in mortality.

continued.
REHABILITATION SECTION

Original Research Article

Kimberly T. Green, PhD, Sarah M. Wilson, PhD, Paul A. Dennis, PhD, Jennifer J. Runnals, PhD, Rebecca A. Williams, MS, Lori A. Bastian, MD, MPH, Jean C. Beckham, PhD, Eric A. Dedert, PhD, Harold S. Kudler, MD, Kristy Straits-Tröster, PhD, Jennifer M. Gierisch, PhD, MPH, and Patrick S. Calhoun, PhD

Cigarette Smoking and Musculoskeletal Pain Severity Among Male and Female Afghanistan/Iraq Era Veterans

Cigarette smoking and musculoskeletal pain are highly prevalent in veteran users of VA healthcare. These conditions co-occur; however, there is limited data specific to recent veterans. A secondary analysis of data from 1090 Afghanistan/Iraq era veterans on pain, PTSD, and depressive symptoms was conducted. An association between current smoking, gender, and moderate/severe pain was revealed. The stronger relationship between smoking and pain in women supports the need for understanding gender-based risk factors.

INTEGRATIVE MEDICINE SECTION

Original Research Article

Elizabeth Donovan, PhD, Megan L. Ranney, MD, MPH, Emily J. Patry, BS, Michelle McKenzie, MPH, Janette Baird, PhD, and Traci C. Green, MSc, PhD

Beliefs About a Complementary and Alternative Therapy–Based Chronic Pain Management Program for a Medicaid Population

Rhode Island Medicaid offers eligible high emergency department utilizers the opportunity to take part in the Chronic Pain program, an integrated treatment approach that includes free complementary therapies (massage, chiropractic, and acupuncture). The aim of the current study was to understand beliefs about the Rhode Island Chronic Pain program from the perspective of the patients receiving services, the range of providers delivering services to patients, and the administrators implementing the program.

CLINICAL PERSPECTIVES

Fact Finders

Byron J. Schneider, MD, Zachary L. McCormick, MD, and Clark C. Smith, MD, MPH; on behalf of the Spine Intervention Society’s Patient Safety Committee

Particulate or Nonparticulate Steroids for Lumbar Transforaminal Injections

LETTERS TO THE EDITOR

Michael H. McCeney, MD

Thanks But No Thanks

James J. FitzGerald, MA, BM, BCh, FRCS(SN)PhD, Timothy J. Lubenow, MD, and Paul Verrills, MBBS

Re: Thanks But No Thanks

Allen W. Burton, MD

Re: Thanks But No Thanks

Raffaele Giusti, MD, Lucilla Verna, MD, Daniela Iacono, MD, Corrado Ficorella, MD, Giuseppe Spinelli, MD, Paolo Marchetti, MD, and Giampiero Porzio, MD

Knowledge and Attitudes of Young Italian Medical Oncologists Toward the Approach and Treatment of Pain: No Changes, Despite the Law

Teresa Brid, MD, Maria Paz Sacristán de Lama, MP, Nieves González, and Ana Baamonde, MD, PhD

Topical Gabapentin as Add-on Therapy for Trigeminal Neuralgia. A Case Report

Karl Steinbach, MD, Horst Bettstetter, MD, and Carolina Link, MD

High-Frequency Spinal Cord Stimulation at 10 kHz for the Treatment of Chronic Neuropathic Pain After a II–III Degree Burn

Josh J. Wang, BSc, MD, Eric Villeneuve, BPharm, MSc PharmD, and Sophie Gosselin, MD, FRCPC, FAACT

Opioid Overdose Risk in Low-Wage Online Workers

Errata