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Cover: “From Yang J, Xiong D, Jiang J, Xiao L, and Li Z. Early Diagnostic Value of 18F-FDG PET/CT in Spontaneous Spondylodiscitis.” (pp. 793–794)

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Transparent Data on a Treatment for Discogenic Pain

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626 Daniel B. Carr, MD
“Pain Is a Public Health Problem” —What Does That Mean and Why Should We Care?

GENERAL SECTION

Original Research Articles

628 Keren Reiner, PhD, Michal Granot, PhD, Eliran Soffer, MA, and Joshua Dan Lipsitz, PhD
A Brief Mindfulness Meditation Training Increases Pain Threshold and Accelerates Modulation of Response to Tonic Pain in an Experimental Study
The study examines effects of brief mindfulness meditation (MM) practice on pattern of change in response to tonic painful stimuli. The potential moderating role of dispositional mindfulness was also examined. Forty participants were randomly assigned to a brief MM training or control group. Compared to control, the MM group showed more rapid attenuation of pain intensity for tonic pain stimuli. Moderation analyses indicated that baseline mindfulness moderated effects of MM on pain threshold.

636 Cheng-ting Lee, MD, Trang T. Vo, BS, Abigail S. Cohen, BS, Shihab Ahmed, MD, Yi Zhang, MD, PhD, Jianren Mao, MD, PhD, and Lucy Chen, MD
Profiles of Urine Drug Test in Clinical Pain Patients vs Pain Research Study Subjects
This study shows that opioid therapy is commonly associated with positive urine drug testing in both clinical pain patients and subjects participating in pain research studies.

Case Report

644 Jennifer Winegarden, DO, Daniel B. Carr, MD, and Ylisabyth S. Bradshaw, DO, MS
Intravenous Ketamine for Rapid Opioid Dose Reduction, Reversal of Opioid-Induced Neurotoxicity, and Pain Control in Terminal Care: Case Report and Literature Review
We report a case of opioid-induced neurotoxicity (OIN) in an actively dying hospice patient, its reversal and improved analgesia that followed opioid dosage reduction made possible after addition of IV ketamine. We review literature for diagnosis and treatment of OIN and suggest a mechanism of action for ketamine in neurotoxicity.

SPINE SECTION

Original Research Article

650 Jung Hwan Lee, MD, PhD and Sang-Ho Lee, MD, PhD
Clinical Efficacy of Percutaneous Endoscopic Lumbar Annuloplasty and Nucleoplasty for Treatment of Patients with Discogenic Low Back Pain
Percutaneous endoscopic lumbar annuloplasty and nucleoplasty (PELAN) obtained favorable outcomes in patients with discogenic low back pain (DLBP) in short and long term follow up period. PELAN can be useful treatment method in DLBP refractory to conservative managements. PELAN contributed to reduce the extensive surgical requirements in DLBP.
Andrew Engel, MD, George Rappard, MD, Wade King, MMedSc, MMed(Pain), and David J. Kennedy, MD, on behalf of the Standards Division of the International Spine Intervention Society

The Effectiveness and Risks of Fluoroscopically-Guided Cervical Medial Branch Thermal Radiofrequency Neurotomy: A Systematic Review with Comprehensive Analysis of the Published Data

There is strong evidence to support cervical medial branch thermal radiofrequency neurotomy when the procedure is performed according to Internal Spine Intervention Society Guidelines.

EDUCATION & TRAINING SECTION

Improving Trainee Competency and Comfort Level with Needle Driving Using Simulation Training

The objective of this study was to assess whether a combination of lecture and model simulation improves resident competency and comfort level with needle driving for interventional pain medicine procedures. Our study demonstrates that simulation training may improve both trainee comfort level and competency with needle driving. After a brief lecture and a 30 minute training session with the simulator, subjective comfort measures and competency measures were significantly improved.

PAIN & AGING SECTION

Contact Heat Evoked Potentials (CHEPs) in Patients with Mild-Moderate Alzheimer's Disease and Matched Control—A Pilot Study

In a small sample of patients with mild-moderate Alzheimer's disease (AD) and healthy elderly controls similar CHEPs and SSEP were found. This finding in addition to normal warmth detection and heat pain thresholds indicates that the processing of both sensory and painful stimuli is intact. Thus, in patients with mild to moderate AD the clinical finding of less frequent pain report cannot be explained by a change in the sensory-discriminative processing of pain.

Age Differences in Decoding Pain from the Facial Expression of Healthy Individuals and Patients with Dementia

The competence of inferring pain in others based on facial displays declines moderately with the age of the observer. However, older observers' performance was only slightly reduced, clearly suggesting that older caregivers are not at risk of becoming visually agnostic for the pain in others.

PSYCHOLOGY, PSYCHIATRY, IMAGING & BRAIN NEUROSCIENCE SECTION

The Perceived Control Over Pain Construct and Functional Status

A novel formulation of the construct, Perceived Control Over Pain, was tested for its effects on functional status using structural equation modelling. The model demonstrated good construct validity for the components of pain, Perceived Control Over Pain and functional status. Mediation by Perceived Control Over Pain was partial but strong, accounting for a 29% reduction in the effect of pain on functional status. Increasing Perceived Control Over Pain will improve patients’ participation in meaningful activities.

OPIOIDS, SUBSTANCE ABUSE & ADDICTIONS SECTION

Use of Opioids in Latin America: The Need of an Evidence-Based Change

The Change Pain Latin America (CPLA) Advisory Panel of Experts is working on the development of initiatives to provide robust epidemiological information about the regional burden of chronic pain in Latin America and to improve the management of chronic lower back pain (CLBP) with or without a neuropathic component.
Resisting Prescribed Opioids: A Qualitative Study of Decision Making in Patients Taking Opioids for Chronic Noncancer Pain

Clinical guidelines for opioids use for chronic non-cancer pain focus on over-use. Our qualitative interview study found that many patients resisted and minimized the use of opioids. Using a published ‘Model of medicine-taking’, we identified various influences on patient decision making. Both patients and doctors had concerns about using opioids for chronic non-cancer pain. These could be the basis of a productive therapeutic alliance to improve communication and shared decision making.

Impact of Data Imputation Methodology on Pain Assessment over 24 Hours in a Randomized, Placebo-Controlled Study of Gabapentin Enacarbil in Patients with Neuropathic Pain Associated with Postherpetic Neuralgia

Gabapentin enacarbil (GEn) 1200 mg, 2400 mg, and 3600 mg was effective and well tolerated in patients with PHN compared with placebo, as confirmed by three different and robust statistical methodologies. Statistically significant improvements from baseline to end of maintenance treatment occurred for the primary endpoint, mean 24-hour average pain intensity score, with all three doses. Most secondary daytime/nighttime endpoints also improved following treatment with GEn.

Transcranial Direct Current Stimulation (tDCS) Targeting Left Dorsolateral Prefrontal Cortex Modulates Task-Induced Acute Pain in Healthy Volunteers

Forty healthy volunteers received anodal and cathodal tDCS targeting left DLPFC in two randomized and counterbalanced sessions. During stimulation, each participant performed cold pressor (CP) and breath holding tasks. We measured pain intensity with the Defense and Veterans Pain Rating Scale (DVPRS). DVPRS rise associated with CP was significantly smaller with anodal versus cathodal tDCS. This may suggest tDCS-related effects on nociception or DLPFC-mediated attention, or preferential modulation of the affective valence of pain.

Burning Eye Syndrome: Do Neuropathic Pain Mechanisms Underlie Chronic Dry Eye?

Chronic dry eye is a multi-factorial disorder that manifests with painful ocular symptoms and visual disturbances, which can only be partly attributed to tear dysfunction. Recent publications suggest that it also involves neuroplasticity in response to neuronal injury and thus shares features of chronic neuropathic pain syndromes. This review emphasizes the key characteristics and pathologic mechanisms of dry eye as it relates to neuropathic pain as well as future directions in its treatment.

Cancer Recurrence and Regional Anesthesia: The Theories, the Data, and the Future in Outcomes

Regional anesthesia has been proposed to reduce the incidence of recurrence of cancer by attenuating the sympathetic nervous system’s response during surgery, reducing opioid requirements thus diminishing their immunosuppres- sive effects, and providing anti-tumor and anti-inflammatory effects directly through systemic local anesthetic action. In this article, we present a description of the perioperative period, a summary of the proposed hypotheses and available literature on the effects of regional anesthesia on cancer recurrence, and put regional anesthesia in context in regard to its potential role in reducing cancer recurrence during the perioperative period.
HEADACHE & FACIAL PAIN SECTION

Original Research Article
776 Pedro Augusto Sampaio Rocha-Filho, MD, PhD, Karine Sobral Marques, Medical Student, Rinalda Cascia Santos Torres, Medical Student, and Kamila Nazare Ribas Leal, Medical Student

Migraine, Osmophobia, and Anxiety
We evaluated the association between osmophobia and the characteristics of patients and their headaches among migraine patients. Patients who consecutively sought medical attendance in a primary care unit were asked about their headaches over the last 12 months, 147 patients who had migraine were included. Osmophobia in migraine patients was associated with significant anxiety symptoms, length of headache history and phonophobia.

REHABILITATION SECTION

Brief Research Report
781 David A. Fishbain, MD, FAPA, Jinrun Gao, MS, MBA, John E. Lewis, PhD, and Lei Zhang, BS

At Completion of a Multidisciplinary Treatment Program, Are Psychophysical Variables Associated with a VAS Improvement of 30% or More, a Minimal Clinically Important Difference, or an Absolute VAS Score Improvement of 1.5 cm or More?
This study examined whether chronic low back pain patients at discharge from a multidisciplinary pain treatment program are improved in their pain on the VAS at 30% or more, a minimal clinically important difference, and an absolute VAS score improvement of 1.5 cm or more. In addition, this study examined whether psychophysical variables are associated with both of these types of improvement.

LETTERS TO THE EDITOR

790 Debasish Hota, MD, DM, Anand Srinivasan, MD, Pinaki Dutta, MD, DM, Anil Bhansali, MD, DM, and Amitava Chakrabarti, MD, DM

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ERRATUM