



Volume 228

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Original Scientific Articles

217 Preemptive Treatment of Phantom and Residual Limb Pain with Targeted Muscle Reinnervation at the Time of Major Limb Amputation

CME

Ian L Valerio, MD, MS, MBA, FACS, Gregory A Dumanian, MD, FACS, Sumanas W Jordan, MD, PhD, Lauren M Mioton, MD, J Byers Bowen, MD, Julie M West, MS, PA-C, Kyle Porter, MAS, Jason H Ko, MD, Jason M Souza, MD, Benjamin K Potter, MD, FACS

Preemptive targeted muscle reinnervation at the time of major limb amputation significantly reduces the incidence and severity of postamputation phantom limb and neuroma-related residual limb pain. Patient-reported outcomes and opioid use of more than 50 surgical patients are compared with a cross-section of 438 untreated controls.

226 Invited Commentary

Kyle R Eberlin, MD

228 Wounding Patterns Based on Firearm Type in Civilian Public Mass Shootings in the United States

CME

Babak Sarani, MD, FACS, Cheralyn Hendrix, MD, Mary Matecki, BS, Jordan Estroff, MD, FACS, Richard L Amdur, PhD, Bryce RH Robinson, MS, MD, FACS, Geoff Shapiro, NREMT-P, Stephen Gondek, MD, MPH, FACS, Roger Mitchell, MD, E Reed Smith, MD

This retrospective study of 23 public mass shooting events evaluated injury pattern, cause of death, and incidence of potentially preventable death based on type of firearm used. Lethality was highest and potentially preventable death lowest for events associated with use of a handgun and lethality was lowest for events associated with a use of a rifle.

235 Three-Year Nationwide Experience with Transanal Total Mesorectal Excision for Rectal Cancer in the Netherlands: A Propensity Score Matched Comparison with Conventional Laparoscopic Total Mesorectal Excision

Robin Detering, MD, Sapho X Roodbeen, MD, Stefan E van Oostendorp, MD, Jan-Willem T Dekker, MD, PhD, Colin Sietses, MD, PhD, Willem A Bemelman, MD, PhD, Pieter J Tanis, MD, PhD, Roel Hompes, MD, Jurriaan B Tuynman, MD, PhD, on behalf of the Dutch ColoRectal Cancer Audit Group

245 Effect of Donor Race-Matching on Overall Survival for African-American Patients Undergoing Liver Transplantation for Hepatocellular Carcinoma

Jack P Silva, BS, Megan N Maurina, BS, Susan Tsai, MD, MHS, FACS,
Kathleen K Christians, MD, FACS, Callisia N Clarke, MD, FACS, Harveshp Mogal, MD, FACS,
Kia Saecian, MS, MD, FACG, T Clark Gamblin, MD, MS, MBA, FACS

Using the Organ Procurement and Transplantation Network database, this study analyzed the effects of matching donor and recipient race in organ allocation for African-American patients with hepatocellular carcinoma receiving a liver transplant. Donor-recipient race-matching was an independent predictor of improved survival.

255 Using Machine Learning to Identify Change in Surgical Decision Making in Current Use of Damage Control Laparotomy

John A Harvin, MD, MS, FACS, Charles E Green, PhD, Claudia Pedroza, PhD,
Jon E Tyson, MD, MPH, Laura J Moore, MD, FACS, Charles E Wade, PhD,
John B Holcomb, MD, FACS, Lillian S Kao, MD, MS, FACS

A successful quality intervention to de-implement damage control laparotomy appeared to change surgical decision making by delaying timing of decision until near the end of the index operation.

265 Valproic Acid and Neural Apoptosis, Inflammation, and Degeneration 30 Days after Traumatic Brain Injury, Hemorrhagic Shock, and Polytrauma in a Swine Model

Panpan Chang, MD, PhD, Aaron M Williams, MD, Umar F Bhatti, MD,
Ben E Biesterveld, MD, Baoling Liu, MD, Vahagn C Nikolian, MD, Isabel S Denny, MD,
Jessica Lee, BS, Yongqing Li, MD, PhD, Hasan B Alam, MD, FACS

Administration of a single dose of valproic acid (150 mg/kg) can decrease neural apoptosis, inflammation, and degenerative changes, and promote neural plasticity in a long-term model of traumatic brain injury. In addition, valproic acid acts, in part, via regulation of nuclear factor- κ B and I κ B α pathways.

Collective Review**276 Disparities in Surgical Access: A Systematic Literature Review, Conceptual Model, and Evidence Map**

Elzerie de Jager, MBBS(Hons), Adele A Levine, MPH, N Rhea Udyavar, MD,
Helen R Burstin, MD, MPH, Nizar Bhulani, MD, MPH, David B Hoyt, MD, FACS,
Clifford Y Ko, MD, MS, MSHS, FACS, Joel S Weissman, PhD, LD Britt, MD, MPH, FACS,
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Eric G Johnson, PharmD, BCCCP, Sara E Parli, PharmD, BCCCP

Continuing Medical Education Program

- 313** Wounding patterns based on firearm type in civilian public mass shootings in the United States. Sarani B, Hendrix C, Matecki M, et al

Additional Articles for March 2019 Online at <http://jacscme.facs.org>

Preemptive treatment of phantom and residual limb pain with targeted muscle reinnervation at the time of major limb amputation. Valerio IL, Dumanian GA, Jordan SW, et al.

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