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## TREATMENT OF CHRONIC PAIN WITH BUPRENORPHINE IN A VETERAN WITH TRAUMATIC BRAIN INJURY

A. Alao<sup>1</sup>, C. Chung<sup>2</sup>, S. Sachdeva<sup>3</sup>

<sup>1</sup>Polytrauma System of Care, Veterans Affairs Medical Center, <sup>2</sup>Medical Education, St. Joseph's Hospital Health Center, <sup>3</sup>Psychiatry, SUNY Upstate Medical University, Syracuse, USA

Case presentation: We report a case of a 27-year-old Iraq War veteran with no previous psychiatric history who sustained severe traumatic brain injury (TBI) following a blast injury from an improvised explosive device. The patient subsequently suffered severe anxiety symptoms controlled only with combined therapy with benzodiazepines and venlafaxine. Even more disabling, the patient also experienced intractable headache and shoulder pain unresponsive to non-steroidal anti-inflammatory agents, tramadol, gabapentin, or NMDA-receptor antagonists. Given the risk of respiratory depression with his current medications, opioid analgesics were not favored for the management of his pain. The patient was started on sublingual buprenorphine at a dose of 8mg three times daily with significant improvement. This dose was maintained and the patient was able to function relatively pain-free.

Conclusion: Chronic pain is a significant complication in patients with TBI and is reported by a majority of patients with TBI, regardless of the severity of the injury. The treatment of chronic pain among individuals can be challenging. Patients with TBI may be on other medications for impulse control, such as anticonvulsants and benzodiazepines. Further treatment with narcotic analgesics may therefore increase the risk of respiratory depression. Buprenorphine is a partial mu agonist whose effects plateau at higher doses, at which time it begins to act like an antagonist. It is this property at higher doses that limits its dose-dependent respiratory depression. Buprenorphine thus has the advantage of effective analgesia with minimal sedation and may be useful to treat chronic pain among TBI patients already taking benzodiazepines.