UVMMC Researchers Join National Study Evaluating Safer Pain Management for Injured Soldiers and Civilians.

Researchers at the University of Vermont are participating in the Prehospital Analgesia Intervention (PAIN) Trial being conducted by University of Pittsburgh and funded by the Department of Defense. The study compares the effectiveness and safety of two medications commonly used to treat pain after injury in soldiers and civilians alike.

The two medications are Fentanyl, an opioid, and low-dose Ketamine, an anesthetic. The study, beginning in the fall of 2024 is led by Daniel Wolfson, MD, Associate Professor of Emergency Medicine, and Ajai Malhotra, MD, Professor of Surgery and Trauma Medical Director of the Level-I Trauma Center at UVMMC.

Right now, both medications are commonly used in Vermont by pre-hospital providers to relieve pain after injury. However, we do not yet know which medication is more effective in relieving pain and is safer in avoiding unpleasant or dangerous side effects. The study will help answer these questions and will be of benefit to both soldiers injured in the field and civilians in the general population, including Vermonters. The study is one of a series of studies funded by the Department of Defense through the Linking Investigations in Trauma and Emergency Services (LITES – www.litesnetwork.org) Network to inform clinical practice guidelines and update the existing standards for the care of traumatic injuries.

“Fentanyl is commonly used to treat pain in trauma patients but can lower oxygen levels and blood pressure, potentially worsening an injured person’s condition and sometimes requiring a breathing tube. There’s also a risk of long-term opioid dependency. Low-dose ketamine is effective in managing pain and may reduce the risks associated with opioids, but may cause side effects such as hallucinations, anxiety, and a feeling of being disconnected,” said Dr. Wolfson. This problem is bigger in the military. “The goal is to help the military provide the best care for our injured personnel, by determining the most effective medicine to relieve the pain and also the one with the least harmful short- and long-term side effects.” Dr. Malhotra added.

The study will enroll about 1000 Injured patients from twelve large academic medical centers in the United States that are part of the LITES Network. These enrolled patients will be randomized to receive either Fentanyl or low-dose Ketamine for pain relief after injury. All enrolled patients will be carefully monitored for both effectiveness of pain relief and for short- and long-term complications. “Both Ketamine and Fentanyl are already used by Emergency Medical Services in Vermont as standard treatment for pain management. This study will help us identify which medication provides the best care while minimizing risks,” Dr. Wolfson noted.

Anyone may opt-out of the study by contacting the research team at 1-800-664-0557 or email PAINStudy@edc.pitt.edu to receive an opt out “NO PAIN Study” bracelet. For more information visit www.ClincialTrials.gov and refer to NCT05437575. It is important for Vermonters to understand that opting out will not prevent injured patients from receiving pain medication as per standard of care, only from enrollment in the study.

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