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Improving Multidisciplinary Communication of Ultrasound Guided Nerve Blocks for Patients with Hip Fractures in the Emergency Department

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Emergency physicians (EPs) are increasingly performing ultrasound guided nerve blocks as a part of multimodal pathways for acute pain management.¹⁻⁴ These single injection blocks are often effective long after patients leave the emergency department (ED). As this practice increases and more clinicians continue to integrate these techniques into optimal acute pain management, clear communication across specialties is essential.⁵ Communication failures can lead to adverse outcomes such as falls, local anesthetic systemic toxicity, or misattribution of expected weakness or paresthesia to a different injury or condition leading to unnecessary workups.⁶ Patients with acute hip fractures are often frail and at high risk for opioid-related adverse events (eg, apnea, hypotension, delirium). Also, there is emerging data indicating long-term benefits (both morbidity and mortality) from acute pain management with regional analgesia.^{7,8} This practice statement focuses on optimal communication between clinicians who are performing ultrasound-guided nerve blocks for hip fractures and clinicians who are taking care of these patients post-block. We believe that structured communication will benefit patient care, reduce errors, and could be expanded to other common injury patterns.

Aim

To provide a standard structured multispecialty framework to allow for best practices around communication and handoffs when performing single injection ultrasound-guided nerve block in the ED. The goal is to ensure safe and efficacious communication so that clear transfer of information and care can occur when nerve blocks are being performed for pain control in acute hip fractures.

Domains of interest**Stakeholder Identification**

Acute pain in management is managed by multiple different medical specialties that can vary widely depending on hospital resources.⁹ The key stakeholders in the multiple departments may include emergency medicine, anesthesiology, nursing, orthopedic surgery, and inpatient medicine. These key stakeholders must meet and discuss local protocols and procedures for the management of patients who will have received single injection ultrasound-guided nerve blocks for acute hip fractures. This discussion about an optimal protocol for pain management in acute hip fractures should occur with all stakeholders before single injection nerve blocks are performed in the ED. This cross-disciplinary discussion ensures best practice to both provide optimal pain management as well as patient safety.

Documentation

Even within a single health system, some centers still have various electronic health records (EHR) preventing efficient communication between various specialties. There may also be different EHRs for different medical specialties. Even when there is a single EHR at a health system, the interface may be noticeably different for each medical/surgical service line and clinician (eg, physician vs. nursing).

We recommend that all single injection ultrasound-guided nerve blocks are documented in the EHR within specific ultrasound-guided nerve block procedure notes. These notes must be documented and signed into the medical record within one hour of the block being performed or before the patient leaves the ED.

We recommend a standard template for ultrasound-guided single injection nerve blocks including the procedure note with a clear pre-block neuromuscular exam, location of nerve block, time administered, name of anesthetic used, and the dose of anesthetic used. All information should be predefined and documented in a standard and clear manner.

Block documentation should incorporate a level of redundancy. The note in the EHR should be accompanied by a physical form of documentation. Potential examples of this may include a paper note on the physical chart, a wristband indicating that a block was performed, or a site marking on the block extremity.

The specific method of redundancy chosen should be agreed upon by all stakeholders. There is precedence for this practice of using a physical cue to identify patient characteristics such as bracelets for limb restriction and fall risk. Single injection nerve blocks may not leave an obvious visual cue as opposed to other procedures like central line insertion or tube thoracostomy, so a separate physical identifier may help ensure that members of the care team recognize when one has been performed on a patient.

Documentation should be structured in such a way that it may be easily queried for quality improvement purposes.

Communication/Handoff

It is recommended that essential team members caring for the patient are in communication when nerve blocks are performed in the ED. The determination of whether the block is performed either in the ED or operating room should be based on predetermined pathways agreed upon by all services involved in the patient's care. This may take the form of a page, email, or phone call. Additionally, hand-off at nursing level should include mention of any nerve block similarly to other medications given during the course of patient care.

Patient Education

Standardized patient education should be provided to patients, emphasizing the risk of falls and expected timing of block resolution based on anesthetic used. Emergency departments should have a standard process or mechanism (eg, departmental contact information) in place for the patient who has downstream complications from this procedure (eg, infection, persistent neuralgia).

Continuous Improvement

A multidisciplinary group should be formed in the hospital that both ensures compliance with agreed upon protocols and improvement in communication tools. This group should meet at regular intervals to reevaluate the protocols and processes.

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