**VGH Hip Fracture Regional Anesthesia Pathway**

**Phase 1: June 2021**

**Preamble**

The purpose of the hip fracture pathway is to deliver high quality analgesia to patients who have suffered a hip facture by administering a peripheral nerve block. There is convincing evidence that such a pathway leads to a reduction in pain score, chest infection, delirium risk and time to first ambulation. It also allows for easier patient positioning for both OR and ward care. Many leading institutions have a similar pathway in place and it is becoming the standard of care worldwide.

**Principles**

This pathway shall:

* Adhere to all relevant safety guidelines for regional block performance and general patient care, recognizing that this patient population is often elderly, frail and with multiple comorbidities.
* Not compromise the length of time it takes for a patient to be admitted to ward from the ER (Admission Time).
* Not compromise or delay time in the operating room for any given patient (OR Time).

**Conditions for Block Intervention**

All blocks must be performed in a monitored setting with capabilities to include at least:

* BP monitoring
* SpO2 monitoring
* ECG

Resuscitation equipment required:

* Intralipid
* Resuscitation cart in nearby space
* Capability to call a code

**Proposed Locations for Intervention**

* ER Department
* PCC Block Intervention Area

**Monitoring Post-Block**

Patients need to be monitored **for at least 30 min** after local anesthetic injection.

**Clinical Work flow:**

**A. Patient in ER (7:00 to 1530) Weekdays**

* ER physician or delegate asks for the Anesthesiologist in Charge (**AIC**) by calling the OR front desk (x**54472**) and is forwarded to his/her mobile phone. AIC is provided with patient Name/MRN/Location *(****and if ER physician wishes to perform the block themselves.****)*
* AIC Response (one of the following):
  + Someone is readily available and will come down. Please ensure the patient is in a monitored bay in ER.
  + No one is readily available. The patient will go to the ward per normal routine.
* ***If the block is performed by the ER physician, this should be communicated to the AIC so that the patient does not receive a second block. Appropriate documentation in ER records should also reflect method of block and drugs used.***
* Under most circumstances, the PAIS anesthesiologist capable with regional blocks will be sent by AIC, but when required, coverage will be provided to allow someone else to attend.
* Ideal timing to contact anesthesia is near same time as ortho consult, in order to not delay admission time.
* Anesthesia consult is performed at the same time as block performance.

**B. Patient already admitted to ward**

* Patients may have missed the block in ER for various reasons:
  + Anesthesia not notified
  + Presenting during after hours or weekends
  + Anesthesia unavailability
* To be made aware of these patients, there are several possible strategies:
  + Morning huddle with the ortho trauma team staff/resident by the “Anesthesia Block Person” (usually PAIS).
  + Potential notification made by ortho ward nursing leaders to AIC.

* Where suitable and appropriate:
  + Patients on the OR slate will be called down early to PCC for block performance. Anesthesia consult will be performed if not already completed.
  + If human resources and space allows, patients not on the surgical slate should be considered to be brought down for block performance also, then returned to ward. These patients must have a ward bed to return to, in order to prevent unnecessary backlog in PCC/PACU.
  + Block performance is to be done in the designated PCC “Intervention Bays”.
* **To prevent compromising OR time**:
  + The first case of the day will generally not have a pre-op block done in PCC
    - If a spinal is used intraop, a block can be performed post-op in recovery.
    - If a general anesthetic is used, a block can be performed just after intubation or prior to extubation. If an additional anesthesiologist is available, doing the block peri-intubation should not negatively impact OR time and will allow for best patient outcome by decreasing anesthetic and opioid requirement.

**Regional Blocks:**

* One of the following blocks may be performed (actual dosage based on clinical factors):
* Peng Block: 0.25% Ropi x 30-40 mL or 0.5% Ropi x 20-30 mL
* Suprainguinal Fascia Iliaca Block: 0.25% Ropi x 30-40 mL
* Femoral Block: 0.25% or 0.5% Ropi x 20 mL or consider higher volume for a “femoral 3 in 1”
* The use of ultrasound guidance is mandatory
* For patients that are partially anti-coagulated, it may be prudent to perform a “shallow” block such as the suprainguinal fascia iliaca block
* Dosage need to take into account patient size and potential renal/hepatic failure

**Documentation:**

* Fill out the Hip Block Record sheet (green paper) which goes to the procedure section of patient chart.
* A photocopy of this record is made and placed in binder in PCC for purpose of future tracking and quality improvement.
* Signage will be taped to the foot of the patient’s bed to signal that a block has been done.

**Ward Care:**

* Routine care only.
* No monitoring for Local Anesthetic Toxicity is required as patients would already have completed such obligatory monitoring prior to going to ward.
* Blocks are expected to last for 8-12 hours generally.
* There may be motor weakness of the blocked limb depending on which block was used.
* Nerve injury from the proposed blocks is extremely unlikely. If a patient has persistent motor weakness, Ortho on call should be notified by ward RN and subsequently Anesthesia may be contacted for assessment via the AIC.

**Potential Limitations:**

* On days where Anesthesiology is short staffed and unable to staff a “Regional Block Position”, the AM Huddle between Ortho and Anesthesia may not be possible.
* Block performance may still be possible if:
  + Ortho alerts AIC of potential block candidates who will then attempt to accommodate.

**Future Direction – For potential adoption at a later period pending further discussion and evaluation**

* Potentially place nerve catheters in order to maximize duration of block. These patients would then need to be under POPS.
* Enhanced communication between Services by using a computer platform or app with proper patient confidentiality safeguards.

PCIS Label

**VGH Hip Fracture**

**Pathway Record**

Date (D/M/Y): \_\_\_\_/ / \_\_\_\_\_ Block time: \_\_\_\_\_:\_\_\_\_\_

Block performed by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ □ Staff □ Fellow □ Resident

Specialty: □ Anesthesia □ Emergency

Block performed at: □ ER □ PCC □ Other: \_\_\_\_\_\_\_\_\_\_

Surgery booked for today: □ yes □ no □ unknown

Monitored setting: □ yes Consent (direct or SDM): □ yes No absolute Contraindication: □ yes

Surgical site confirmed: □ yes

Block(s) performed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Needle: \_\_\_\_\_\_\_ g \_\_\_\_\_\_\_ mm

Injectate: □ Ropivacaine: \_\_\_\_\_\_ % \_\_\_\_\_ mL

□ Bupivacaine: \_\_\_\_\_\_ % \_\_\_\_\_ mL □ with epi

□ Lidocaine: \_\_\_\_\_\_ % \_\_\_\_\_ mL □ with epi

Sedation if required (Drug & Dose): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Events: □ none: easy & well tolerated

□ paresthesia □ severe radiating pain □ possible nerve injury

□ vascular puncture

Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This is a repeat block this admission: □ yes If yes: date of other block(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nerve Block

Performed

*Place Signage on Patient Bed*

Date/Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_