Proposed pathway for streamlined care of patients with fractured NOF in Launceston Hospital Emergency department 2019

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PATHWAY FOR CARE OF PATIENTS WITH FRACTURED NECK OF FEMUR (NOF)

Fracture NOF identified/ strongly suspected

Assessment:
- Ensure adequate history and examination documented
- Secure IV access
- Routine investigations:
  - Blood: FBC, UEC, LFT, CMP, Coag, Group and hold
  - X-rays- pelvis, affected side hip and chest
  - 12 lead ECG
- Other specific tests (e.g. to investigate cause of fall)

Management:
- Prompt analgesia:
  - Regular: Paracetamol and long acting opiate (e.g. Targin) charted.
  - PRNs: IV/SC Morphine or Fentanyl PRN charted. Oral oxycodeone PRN (e.g. Endone) charted.
- Nerve block: Femoral block (or 3-in-1 block or Fascia iliaca block)
- Nil by mouth: Pending surgical decision regarding timing of surgery.
- IV fluids: Maintenance fluid charted for at least 8 hours.
- Other meds: PRN anti emetics and essential routine meds charted.
- Place IDC: After nerve block when feasible.
- Notify Ortho reg: 0418484270 or via switch (9)
- Other team(s): (e.g. Medical reg review)
  - If an acute medical issue exists, consult in ED.
  - If no urgent medical issue, consult(s) in Ortho ward.
- Book booking: Admit under Orthopedics consultant of the day.
- Direct admission*: To be considered if delay >1 hour for Ortho reg review.

NOF pathway LGH ED
Version 1d March 2019

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(Back page)

LAUNCESTON GENERAL HOSPITAL EMERGENCY DEPARTMENT
PATHWAY FOR CARE OF PATIENTS WITH FRACTURED NECK OF FEMUR (NOF)

ASSESSMENT

History:
- Details including pertinent elements such as premorbid status, anticoagulation/antiplatelet use, health directives (if any) etc. should be documented.

Clinical examination:
- Standard medical documentation should include all systems examinations.
- Many patients have delirium in days post injury (either in ED or later on the ward). It is important that a baseline cognitive state is clearly documented.
- Nurses are to document baseline skin/pressure injury status as routine. This is best examined once the Femoral nerve block effective.

Investigations:
- IV cannula (20G or larger bore) be placed.
- Routine blood tests and X-rays (as listed on page 1) to be ordered on arrival, and results should be reviewed.
- Specific tests such as CT scans, urinalysis etc. are to be performed based on the scenario. Ensure results are reviewed.

MANAGEMENT

Analgesia:
- The analgesics recommended on page 1 are guidelines only. You may choose suitable alternatives for the individual patient. Majority of patients that sustain NOF fractures are elderly people with significant comorbidities (e.g. Renal impairment). Hence exercise caution with NSAIDs.

Nerve block:
- It is recommended that a Femoral nerve block (or variant) be placed as soon as the diagnosis is confirmed. Prompt placement of regional (nerve block) anesthesia in patients with fractured NOF is universally considered a safe and effective method to control pain for moderate durations. It allows nursing care of the patient to be done more efficiently and reduces risk of side effects from other analgesic options.
- Exclude absolute contra-indications e.g. Allergy to local anaesthetic, and relative contraindications such as previous ilioinguinal surgery (e.g. femoral vascular graft), large inguinal lymph nodes or tumour, local sepsis, peritoneal infection, and pre-existing femoral neuropathy. It should be performed by a skilled operator, and placement under ultrasound guidance is proven to be much safer and more effective than blind technique. The time of injection must be documented on the medication chart.
- Maximum doses of local anaesthetics are as follows:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Onset (min)</th>
<th>Duration (min)</th>
<th>Max safe dose (mg/kg)</th>
<th>Common preparations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lignocaine (Xylocaine)</td>
<td>2</td>
<td>15-60</td>
<td>3mg/kg</td>
<td>Lignocaine 1%=10mg/ml</td>
</tr>
<tr>
<td>Bupivacaine (Marcain)</td>
<td>5</td>
<td>120-240</td>
<td>2.5mg/kg</td>
<td>Marcain 0.5%=5 mg/ml</td>
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Note: 2-3 ml of 1% Lignocaine and 15-20 ml of 0.5% Bupivacaine should suffice for a 70 kg adult patient. The maximum doses described in the table above are seldom required. Addition of 1 ml of 8.4% Sodium bicarbonate per 10 ml volume of anaesthetic can improve the anaesthetic injection experience for the patient.

- Intralipid 20% dose (For local anaesthetic toxicity) 1-1.5 ml/kg stat (i.e. 100 ml for 70 kg patient). Can be repeated every 3 minutes up to two further doses if necessary. Then infuse 0.25 mg/kg/min for 30-60 min.

- It is essential to keep patients nil by mouth till the surgeon confirm the time of surgery. Maintenance IV fluid to be charted for initial 8 hours. Unless there is a specific indication for other fluids, 0.9% Normal Saline is sufficient as initial maintenance fluid. If normal saline has been used for rehydration, an alternative fluid such as 3% Dextrose/1.5 normal saline or CSL will be suitable for maintenance. Replace electrolytes if indicated.
- Ensure PRN medications are charted. It is recommended to chart at least PRN analgesia and PRN anti emetics.
- Ensure all essential routine meds (excluding ones that need to be withheld, e.g anticoagulation) are charted. Discuss with ED consultant if in doubt re: medications not to be charted.
- An indwelling catheter is recommended for patients with fractured NOF. This is best done after the nerve block has taken effect.

Disposition:
- Refer to Orthopedics registrar as soon as diagnosis confirmed. The contact number is provided on page 1.
- If the patient has an acute medical or other non-orthopedic issue that needs to be addressed while the patient is in ED, refer as appropriate for consults.
- For all non-urgent inpatient consults, the referrals are to be made by the orthopedics team while the patient is on the ward.
- Admission is to be booked under the admitting orthopedics consultant of the day.

*Direct admissions:
At the time of writing this document, the direct admission process is still under development in Launceston hospital. Criteria for direct admissions will be on a separate document.

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Back page (Assessment section)

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