Adult Emergency Nurse Protocol

Health
South Eastern Sydney
Local Health District

FLANK PAIN

SESLHDPR/388

Aim:
- Early identification and treatment of life threatening causes of flank pain, escalation of care for patients at risk.
- Early initiation of treatment / clinical care and symptom management within benchmark time.

Assessment Criteria: On assessment the patient should have one or more of the following signs / symptoms:

- Pain to flank region
- Unilateral flank pain
- Sudden onset and restlessness
- Severe / intermittent pain
- Groin / testicular pain (radiation)
- Haematuria
- Nausea and vomiting
- Urinary frequency / urgency
- PMHx of renal presentations

Escalation Criteria: Immediate life-threatening presentations that require escalation and referral to a Senior Medical Officer (SMO):

- Sudden collapse
- Pregnancy (consider ectopic)
- Abdominal distension / tenderness
- Elderly > 65 years
- Not passing stools or flatus
- Trauma to flank/groin/abdo
- Acute confusion / delirium
- Fever / Sepsis
- Tenderness of spine, loin or testicle

Primary Survey:
- Airway: patency
- Circulation: perfusion, BP, heart rate, temperature
- Breathing: resp rate, accessory muscle use, air entry, SpO_2.
- Disability: GCS, pupils, limb strength

Notify CNUM and SMO if any of following red flags is identified from Primary Survey and Between the Flags criteria.

- Airway – at risk
  - *Partial / full obstruction*
  - *Immobilise c-spine [as indicated]*
- Disability – decreased LOC
  - *GCS ≤ 14 or any fall in GCS by 2 points*
- Fluids
  - Inability to void
  - Haematuria
  - Hydration status- In/Out
- Breathing – respiratory distress
  - *RR < 5 or >30 /min*
  - *SpO_2 < 90%*
- Exposure
  - *Temperature < 35.5°C or > 38.5°C*
- *Glucose*
  - *BGL < 4mmol/L or > 20mmol/L*
- Circulation – shock / altered perfusion
  - *HR < 40bpm or > 140bpm*
  - *BP < 90mmHg or > 200 mmHg*
  - *Postural drop > 20mmHg*
  - *Capillary return > 2 sec*

History:
- Presenting complaint
- **A**llergies
- **M**edications: Anticoagulant Therapy, Anti-hypertensives, Diabetic meds, Analgesics, Inhalers, Chemotherapy, Non-prescription meds, any recent change to meds
- **P**ast medical past surgical history relevant: previous episodes of renal calculus, family history, obesity,
- **L**ast ate / drank and last menstrual period (LMP) / bowel motion
- **E**vents and environment leading to presentation
- Pain Assessment / Score: **PQRST** (Palliating/ provoking factors, Quality, Region/radiation, Severity, Time onset)
- Associated signs / symptoms: nausea and vomiting, urinary frequency / urgency, haematuria, tachycardia, hypotension, flank pain may radiate to back, groin or testicles.
- History: family, social, trauma i.e. non-prescribed drug use, ETOH, smoking.

Systems Assessment:

Focused abdominal assessment:
- *Inspection:* Scars, masses, distention, bruising, discoloration, midline pulsations, devices and movement of patient
- *Auscultation:* Bowel sound; hyperactive, reduced or absent
- *Palpation:* tenderness, guarding, rebound tenderness, masses, pulses – signs of peritonism; Identify location of pain

Notify CNUM and Senior Medical Officer (SMO) if any of following red flags is identified from History or Systems Assessment.

- PMH - Abdominal Aortic Aneurysm
- PMH - Renal Impairment
- Acute confusion / delirium
- Peritonism – guarding / rigidity
- Tachycardic and Hypotensive
- Anticoagulant medications
- Trauma to flank
- Decreased or No urine output
- Haematuria

Investigations / Diagnostics:

Bedside:
- BGL: If < 3mmol/L or > 20mmol/L notify SMO
- ECG: [as indicated] look for Arrhythmia , AMI

Laboratory / Radiology:
- **Pathology**: Refer to local nurse initiated **STOP** FBC, UEC,

• Urinalysis / MSU • Urine Beta-HCG	Blood Cultures (if Temp >38.5 or <35°C) Group and Hold (if bleeding suspected) Coags *(if on anticoagulant therapy)* • **Radiology:** Refer to SMO
Nursing Interventions / Management Plan: **Resuscitation / Stabilisation:** • Oxygen therapy and cardiac monitor [as indicated] • Analgesia • IV Cannulation (16-18gauge if unstable) • IV Fluids: Sodium Chloride 0.9% 1 L IV stat versus over 8 hours [as clinically indicated]	**Symptomatic Treatment:** • **Antiemetic:** as per district standing order • **Analgesia:** as per district standing order • **IV Fluids:** as per district standing order
Supportive Treatment: • Nil By Mouth (NBM) • Monitor vital signs as clinically indicated (BP, HR, T, RR, SpO_2) • Monitor neurological status GCS [as clinically indicated] • Monitor pain assessment / score	• Fluid Balance Chart (FBC) • Bowel chart [as indicated] • Consider devices: IDC [as indicated]

Practice Tips / Hints:

- Patients typically present with acute pain related to renal colic, although some patients are asymptomatic.
- Pain is produced due to an increase in renal pelvic pressure, ureteric spasm, and local inflammatory effects at the level of the calculus.
- Consider other differential diagnoses for this clinical presentation including bowel pathologies (appendicitis, diverticulitis, perforation), a major vascular event (leaking abdominal aortic aneurysm) or a gynaecological emergency (ectopic pregnancy).
- Non Steroidal Anti Inflammatory Drugs (NSAIDs) such as diclofenac or indomethacin are just as effective as opiates in the treatment of renal calculi pain.
- Persistent obstruction of the ureter can lead to hydronephrosis of the urinary tract and lead to renal failure.
- An infected obstructed kidney is a urological emergency needing immediate drainage by percutaneous nephrostomy
- The majority of stones that are less than 5 mm in diameter are likely to pass spontaneously, and most stones pass within a month.
- Multiple risk factors include chronic dehydration, diet, obesity, positive family history, gout, peptic ulcer disease, Crohns disease and medicines.
- Non-contrast CT scan of the abdomen/pelvis is the preferred imaging modality.

Further Reading / References:

- UpToDate (2017) Diagnosis and acute management of suspected Nephrolithiasis in adults https://www.uptodate.com/contents/diagnosis-and-acute-management-of-suspected-nephrolithiasis-in-adults?source=search_result&search=flank%7C%20pain&slectedtitle=1~150
- Xavier Anil, Maxwell Alexander (2011) Which patients with renal colic should be referred? Practitioner 255.1737, 15-7
- Cameron P, Jelinek G, Kelly A-M, Murray L, Brown A FT (2009) Textbook of Adult Emergency Medicine, Churchill Livingstone
- Brown A, Cadogan M (2011) Emergency Medicine, Diagnosis and Management, sixth edition, Hodder Arnold.
- ECI Clinical resources for renal. https://www.aci.health.nsw.gov.au/networks/eci/clinical/clinical-resources/clinical-tools/renal

Acknowledgements: *SESLHD Adult Emergency Nurse Protocols were developed and adapted from:*

- Murphy, M (2007) Emergency Department Toolkits Westmead Hospital , SWAHS
- Hodge, A (2011) Emergency Department, Clinical Pathways. Prince of Wales Hospital SESLHD.

Revision and Approval History

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