"From the Trough"

Perioperative Interest Group Notes

The imperfect opinions in these reports are only meant to stimulate discussion: - they should not be considered a definitive statement of appropriate standards of care.

Date 16/9/21

TOPIC 1: Cannabinoids, elective surgery, and MH family hx

38yo female for elective TKR.

Background
- Severe CP with spastic paraparesis
- Asthma
- 4WW
- Seizure disorder

Issues
- Cannabinoid use - prescribed
- Family member (1st cousin) with muscle biopsy-proven MH

Discussion
- **How was her cannabinoid use managed perioperatively?**
  - In collaboration with the hospital pharmacists, local guidance for *adults* is to:
    - Confirm suitability of use (i.e., for a condition with recognised benefit)
    - Confirm it is a prescribed, pharmacy-supplied cannabinoid.
    - Where possible, cease use 7d preoperatively
    - The product may be prescribed in hospital if the correct procedure is followed (see attached factsheet) and must be stored in the S8 cupboard.
    - Pharmacy would appreciate a proactive preoperative approach. https://intranet.hne.health.nsw.gov.au/__data/assets/pdf_file/0011/386516/Continuation_of_cannabinoid_IPU_form_v.1.pdf

- **MH family hx, how to proceed?**
  - This patient had had previous surgeries using volatile anaesthetic with no issues, making her very low risk
  - Given this is a procedure normally undertaken under SAB and sedation, easy to provide a trigger-free anaesthetic
  - Should we do a muscle Bx on this patient while she's under anaesthetic?
    - Dedicated team normally reviews each case individually and formulates a plan (*if indicated*) for investigation. Takes time to organise.

        - If the genetic variant affecting the patient is known, then the other family members can have genetic testing alone.

Plan

- Proceed to OT.
- Cannabinoids to be prescribed in hospital through the appropriate pathway.
- Trigger-free anaesthetic.

TOPIC 2: Cataract surgery, too high risk?

66yo male declined from a small peripheral hospital for cataract surgery.

Background

- Cataract surgery on one side previously. Poorly tolerated with possible contributors from APO/claustrophobia/anxiety.
- OSA – not on CPAP
- AF, no embolic events, on apixaban
- T2DM, HbA1c 9.1%
- CKD stage V, fluid restriction 1.7L. Recent review by Renal Outreach Team (palliative care physician led). Decision reached that this patient was not suitable for dialysis. Comfort and QoL goals of care, rather than life-prolongation.
- Recent APO – due to non-adherence with fluid restriction. TTE showed atrial flutter, mildly reduced RV systolic function, normal LV.
- PEA arrest due to type 2 respiratory failure. Managed with NIV.

Issues

- **Should surgery proceed?**
    - Cataracts can be considered a palliative, QoL enhancing operation.
    - Really necessary with one cataract already done? – apparently the gains are significant. Recommended by ophthalmologist.
    - HbA1c is only modifiable feature, but the surgeons are unconcerned and at this palliative stage of the patient's life journey, unnecessary to push for an improvement.

- **Anaesthetic technique?**
    - Unlikely that the block/sedation will be well tolerated.
    - With fluid status well controlled with fluid restriction and a reassuring TTE, seems unlikely that there are CVS concerns that prevent a GA for this low-physiologic stress procedure.
    - With short-acting agents and no opioid requirement postop, a recurrence of his previous type 2 resp failure seems unlikely.

Plan

- Proceed with surgery under GA at JHH.

TOPIC 3: Hernia repair, severe respiratory disease

61yo male with an umbilical hernia which is increasing in size and with recurrent incarcerations.

Background:

- Severe bullous emphysema
  - Distant ex-smoker
  - Regular review by respiratory physician
  - Distant lung reduction surgery.
  - Endobronchial valves on right side inserted ~ 10yrs ago. Designed to reduce distal gas trapping.
  - Previous spontaneous Pneumothorax
  - Home O2 (concentrator)
  - 4 x admissions with exacerbations, last in '20, nil ICU.
  - Formal PFTS: FEV1 1.15 (36%), FVC 3.82 (94%), bronchodilator responsive, TLCO 48%
  - Desaturated to 74% with ~50m walk. Declined stairs.

- Clinical Frailty Scale 4
- T2DM – OHA, HbA1c 7.2%
- Dyslipidaemia
- Chronic back pain, opioid tolerant

Issues and discussion

- **Should surgery proceed**
  - Without elective procedure, the patient will likely present for an emergency procedure, perhaps critically unwell, due to an incarceration or strangulation.

- **Severe respiratory disease**
  - BODE index 80% mortality at 52mths.
  - GUPTA postop resp failure 5.45% risk
  - Short course of high dose steroids indicated preoperatively? With such critical lung disease any gains welcome. See attached article.

- **Anaesthetic technique?**
  - What is the implication of the endobronchial valves if GA with PPV indicated?
  - Procedure under combination of regional anaesthesia (rectus sheath blocks) and top up with LA by surgeon ideal.
  - Risk of precipitating respiratory failure (or at least respiratory anxiety!) if intercostal muscles inactivated by high SAB.
  - Slowly titrated EDB an option.
  - Regional/neuraxial ideal for post-op analgesia.
  - GA an option - Lung volumes and TLCO reassuring, however risk of bullae rupture.

Plan and Requested Actions:

- Respiratory physician discussion. *Update:*
  - Physician felt that this patient has been stable for several years
  - Recent review suggested no targets for optimisation

    - Preoperative prednisone won't cause harm but unlikely improvement due to the bullous nature of this patient's emphysema.
- Intraoperative implications of the endobronchial valves. *Update:*
    - Spoke to Cardiothoracic team – no local experience.
    - Spoke to resp team (who insert and manage these valves) – no implications for PPV.
- If GA required; low pressures, spontaneous ventilation where possible, and cognisant of risk of bullae rupture.
- ICU level 3

TOPIC 4: Cancellation for respiratory issues

Distance patent for C3/4 laminectomy.

Background

- Respiratory disease
    - Ex-smoker
    - 2015: FEV1 1.6, SpO2 91%
- HCV + but no viral load, spontaneously cleared
- 4WW, independent with ADLs

Events

- Distance patient, in-person review not arranged.
- Requested ECG from GP, spirometry on arrival
- Patient in the anaesthetic bay at 5pm, wheezy, SpO2 84%, FEV1 1L, ECG – RBBB, no improvement with bronchodilator.
- Surgery cancelled; patient admitted to the ward for TTE (? Cardiac contribution) and respiratory r/v.

What can be learnt?

- **Should they have been reviewed in person?**
    - Challenging times, differential lockdowns from our district to another. Risk of patients having to self-isolate for 14 days if they attend a clinic appointment.
    - Our preferences may not align with the patient's choice.

- **Were there red flags?**
    - 91% SpO2 on RA documented 5yrs previously.
    - Would be useful to ask GP for updated set of observations. This would provide reassurance (if normal) or would prompt a review and optimization (if abnormal).

- **Who should have spirometry?**
    - Evidence suggests it is indicated for:
        - The identification and characterisation of respiratory disease (obstructive and restrictive).
        - Patients with COPD or asthma, where there is suspected deviation from best baseline.
        - Thoracic surgery- assessment of post-operative predictive lung function.

TOPIC 5: Consult for TKR

73-year-old man referred by medical team for consideration of TKR. Previously considered too high risk for surgery but had recent CABG with uneventful perioperative journey.

Background

- Osteoarthritis knee - wheelchair-bound
- Paroxysmal AF - Warfarin and Bisoprolol
- Chronic Renal Disease – Stage 2
- Chronic bilateral lymphoedema
- Pseudogout
- Inflammatory arthritis - two previous episodes of septic arthritis in Right knee
- Increased BMI

Issues

- IHD – Stable disease post-surgical revascularisation. Emergent procedure in setting of NSTEMI.
- Poor Glycaemic Control – HbA1c on last admission 9.8% (in context of recent major surgery). Random BSL at clinic 16 mmol/L.
- Deconditioning and significant immobility
- Chronic pain - On hydromorphone. Unable to tolerate NSAID's due to renal disease.

Discussion

Recent Cardiac Revascularisation

- Cardiology review and echocardiogram normal
- CABG done in setting of NSTEMI and refractory angina requiring GTN infusion
- Currently on aspirin and warfarin
- Timeframe post-NSTEMI should be considered despite surgical revascularization.

Glycaemic control for major joint surgery

- The current guidelines are HbA1c<7.5% for major joint replacement.
- SGLT-2 or GLP-1 receptor agonist are excellent options to improve glycaemic control and aid weight-loss. This should be physician-led.

Increased BMI and Immobility

- Limited due to OA and knee pain
- Dietician - very difficult to access at present. GP/endocrinologist most effective pathway
- Physiotherapy input. Consider cardiac rehabilitation programme?
- Currently awaiting appointment with HIPs - will have access to allied health also.

Physician-led referral

- Excellent opportunity for perioperative optimisation in conjunction with medical team
- Difficult to prepare a patient for surgery until we know he is a candidate
- Issues are mainly surgical, suitability for procedure can only be assessed by surgeon

Plan

- Refer to physician with above recommendations to optimise for surgery
- Recommend surgical review

TOPIC 6: Bladder Botox and IHD

94-year-old lady for bladder Botox

Background

- Urinary incontinence
- Previous bladder Botox minimally successful
- CKD - Stage 2
- NIDDM
- Severe OSA - on CPAP
- Chronic Back pain - laminectomy in 2018

Issues

- Extensive IHD – Multiple previous admissions with ACS requiring PCI.
- Ischaemic cardiomyopathy - Recent Sestamibi: LVEF 36% and fixed LAD territory abnormality
- Type II MI and episode on non-sustained VT associated with anaemia (Hb=66).
- Suspected upper GI bleed as cause of anaemia. Conservative management by gastroenterologist. Aspirin ceased and clopidogrel continued.
- Cardiologist has advised she should continue clopidogrel and is 'unsuitable for any procedure' during recent anaesthetic clinic review at Maitland

Discussion

Management of antiplatelet agent

- Surgical team have requested 7 day-cessation of clopidogrel
- Discussed cardiac history with team, they are concerned regarding bleeding on clopidogrel but happy to recommence aspirin
- Is it appropriate to recommence aspirin in setting of suspected upper GI bleed?
- Previous bladder Botox performed on DAPT but team felt surgical bleeding was unacceptable. Uneventful GA.
- Risk of further Type II MI with bleeding

Plan

- Face to face review in clinic
- Liaise with gastroenterologist for advice regarding aspirin