# "From the Trough"

## Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 10th September 2020. Publication date 17th[d] September 2020.
Website: www.perioptalk.org

*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.*

**TOPIC 1:** **Infrarenal AAA, ? Suitable for EVAR**

A 79 year old male booked for an infrarenal EVAR for an incidental 6.5cm infrarenal AAA.

Relevant history:

- Obese BMI 41
- Mild heart failure (EF 48%)
- Severe OSA, RDI 42 p/h with desat to 66%. Intolerant of CPAP.
- Ex tol < 100metres, DASI 3.2 METS
- COPD, Ex-smoker (? 12mth ago)
- CKD - creat baseline 174
- T2DM - not on insulin
- IHD - 3V CABG 2012
- Frail - CFS 6 (Moderately fraily), previously has engaged with falls prevention service, NH resident
- Jehovah's witness

Examination and Investigations:

- SpO2 92% on RA
- TTE: Normal LV size, impaired systolic fx (EF 48%), Mild MR/TR
- Hb normal
- HbA1c 7.2%
- Albumin 29

Issues for discussion

- Anaesthetic technique if decision to proceed - patient cannot lie flat therefor GA would be needed.
- OSA optimisation doesn't seem likely as patient was completely intolerant of CPAP previously
- Is his frailty modifiable at all? Nutrition (note high BMI), exercise?
- Risk with conservative mx - ~ 10-22% rupture rate per year. Unlikely to survive ++
- Risk prediction:

- NICE guidance suggests only CPET has evidence for risk prediction in this setting (booked for 16th September)
- SORT score 3.8-5.4% risk of death
- NSQIP death 2%, serious complications 15%
- Overall the risk of the EVAR itself is intermediate, but the patient is unlikely to do well if any complications occur, and is not a candidate for open primary or corrective surgery

Outcome

- Thought that the risks of proceeding were probably less than the risks of conservative mx (if the EVAR is successful), thus the CPET was likely to be helpful in further quantifying the risks, and in demonstrating to the patient the challenges of a perioperative period (particularly should any complications occur). May be difficult to gain a maximal test in this patient due to BP/HR constraints with a known AAA, thus the test may not be useful.
- A period of prehabilitation could be useful in this patient, guided by the CPET results, in improving his frailty and preparing him for the physiologic challenges of, in particular, any surgical complications.
- Update: phoned the surgeon who advised me that the anaesthetist who saw the patient (face-to-face) in clinic had advised him that the patient was extremely unfit, and based on this the decision had been to cancel surgery, with consideration in the future should the patient become symptomatic. Decided that the CPET examination should go ahead, as this may still allow risk stratification for future discussions and could still be used to guide physical optimisation. The value of face-to-face patient assessment is emphasised in this setting.

**TOPIC 2: Open Septorhinoplasty, reconstruction, olecranon cartilage graft, FESS +/- tracheostomy**

A 45 year old male with Wegener's Granulomatosis (phone consult, then face to face consult due to significant co-morbidities)

Background

- Wegeners Granulomatosis, ANCA-associated vasculitis
  - Collapsed nasal cartilage
  - Chronic sinusitis with fungal organisms requiring surgical management
  - Subglottic stenosis - previous awake tracheostomy, decanulated after balloon dilatation, "mild" residual stenosis on CT with nil clinical features of stenosis (stridor, orthopnoea, WOB)
  - Immunosuppressed 25mg pred/day, azathioprine
- COPD
  - Quit smoking 12mths ago
  - Admission several months ago with COPD exacerbation
  - Latest FEV1: 1.37L (approx. 55% predicted)
- Opioid dependent, 135 OMEs/day
  - Severe pain in hip, chronic infection

    - Steroid associated avascular necrosis of hip
- Low exercise tolerance - COPD plus severe hip pain, mobility scooter

Discussion:

- Opioid dependence - Nil changes to pain meds, patient known to HIPS (complex relationship)
- Quantification of subglottic stenosis - CT suggests mild, nil clinical features provides reassurance, flow-volume spirometry loops would be interesting and can aid in location of stenosis, but not offered routinely, diagnosis is already made, and may not offer a great deal of practical help for airway management intraoperatively.
- COPD - ? Spirometry useful. Is patient's reassurance that he has returned to his baseline likely just as useful. The evidence for for spirometry prior to extra-thoracic surgery (unexplained SOB, or COPD/asthma where return to baseline cannot be determined by patient). The use for major abdominal surgery in patients with prior significant respiratory disease may help determine fitness for surgery and anaesthetic management. IT is likely that formal lung function studies more useful.
- Airway management for FESS/Open septorhinoplasty - case series suggesting that patients with known SGS due to WG can be managed safely using LMA, and this is supported by the surgical team. Tissue at the SGS is likely to be friable and airway instrumentation may lead to bleeding and airway misadventure. However, anxiety provoking to perform bloody nasal/sinus surgery with only LMA. Need open discussions between the surgical team and procedural anaesthetist to determine safest path, with success highly dependent on good relationships and a familiar team. Case was discussed with procedural anaesthetist to forewarn them of case.

## TOPIC 3: Gastroscopy and Colonoscopy, ? MH

A 46 year old male for a gastroscopy and a colonoscopy with Rubinstein Taybi syndrome

History

- RT syndrome - cognitive disability, previous mitral valve replacement.
    - No MH associated with this condition however can have arrhythmias with suxamethonium
    - Patient lives alone and has carer under NDIS, he uses a walking stick and has hearing aids

- ? Allergy to Suxaemethonium
    - Has a HARD CARD - Reaction to suxamethonium (? arrhythmia) reported occurring during a previous anaesthetic (not in HNE). HARD card suggests allergic to sux and volatile anaesthetics, ? MH
        - Trigger free anaesthesia since then, further tests required?

Discussion

- For *this* anaesthetic - easy to give a trigger free anaesthetic, procedural anaesthetist + theatre team already aware, will have the OT prepped for "MH" patient.
- Should testing occur
    - Vague information available
    - Would be beneficial if his result was negative, meaning future anaesthetics could safely include volatile anaesthetics and possibly suxamethonium.
    - Clearer information for patient in case he required medical care out of area, where his medical info (HARD card etc) wouldn't be as accessible.

- Current HNE Guideline (including long flushing time of machine) have been superseded by guidelines set out by ANZCA - ? Why discrepancy. Guidelines should align. This will be followed up and updated as necessary.

**TOPIC 4:** **Update on last week's Patient – Open Radical Nephrectomy**

Background

- Left renal tumour, likely cancer, incidental finding, large size making it unsuitable for radio frequency ablation.
- Obese - 170 kgs, BMI 54, previously has seen dietician without success.
- Reduced exercise tolerance(knee pain + SOBOE), SOB after 1 FOS, DASI suggested 5 METS
- Nocturnal cough, non-severe, nil other cardiac symptoms. Trialling inhaler from GP. CT chest (non-HRCT) showed no clear cause.
- High risk for OSA based on STOPBANG

Update:

- Patient unable to perform bike CPET due to knee pain. Treadmill available but would result in same outcome. The knee OA impedes his ability to partake in HIIT program at Kaden Centre.
- ? Hydrotherapy options possible - to be looked into and discussed with patient. No evidence in prehab setting but does have limited evidence in COPD patients (see attached paper).
- PFTs performed at CPET show respiratory cause of SOBOE less likely, with nil e/o airway obstruction or significant restriction, and ~ normal TLCO.
- Patient's cause of SOBOE remains undetermined and has now not had an exercise stress test (through CPET). Plan for dobutamine stress echocardiography. Examination of choice given surgical time frame.

**TOPIC 5:** **Update from patient 27th August - Lobectomy**

A 70 year old male with cirrhosis for upper lobectomy

Background

- Obesity (103kg)
- CCF – preserved ejection fraction.
- Severe OSA – intolerant of CPAP
- Liver cirrhosis – Chid pugh A – episode of decompensated liver failure in early 2020. Likely secondary to excess alcohol. Now stable on medical therapy. However still drinks 2-3 standard drinks per day. Platelet count 98.
- COPD – ex smoker. FEV1/FVC: 2.3L/3.2L.
- Prostate cancer – radiation therapy.

Discussion

- Wedge resection instead of lobectomy possible on DOS.
- Routine thoracic anaesthetic. Discussion with surgeon re pre-op platelets. On standby only, not given.
- 4hr stay in PARU due to ICU bed unavailability. Discussion about optimal observation of untreated OSA patients. A long period of observation in PARU is useful to identify the patients who have a very narrow therapeutic window between analgesia and sedation.
- Significant delirium, not unexpected, resolved after 3 days.
- Home day 5.

**TOPIC 6:** **FESS and severe asthma**

A 51 year old male, severe asthma, seen in clinic, face-to-face.

Background

- Patient with severe asthma - surgery previously cancelled (~18/12) for asthma optimisation. Now on mepolizumab with excellent result. De-escalation of all other asthma meds. Spirometry = normal.
- Long delay to sinus surgery due to this, and the sinus surgery will likely improve his asthma further as the chronic infection is irritant.
- In systems-review in clinic, identified to have ongoing issue of recurrent syncopal events:
    - Sudden loss of consciousness.
    - Nil pre- or post-epileptic features
    - Has fallen off bike and fractured clavicle during one event
    - CTB, stress echo, ECG all normal.

- Loop recorder implanted in June (nil events since then)
- Occur in context of challenging episodes with sinus pain, although not in intense pain at that exact moment.
- Patient has not seen a neurologist and no mention of neurologist review in multiple cardiologist letters.

Discussion

- ? should see a neurologist preop. Desire to avoid further delays to surgery but consensus was that this issue was unresolved.
    - Discussion with Neurology who suggested that there would be ~ 4/12 wait for "rapid" outpatient review at present. An EEG in clinic will almost certainly be normal. A week-long EEG would take even longer to arrange and again, will likely be normal. These episodes do not sound like a seizure and are not life-threatening (self-resolved). Should one occur during postoperative period, ideal timing to observe and document it, but shouldn't delay surgery trying to evaluate it.

- Is his ? cardiac issue fully elucidated. Investigations all normal. Loop recorder event recording may take many months or years.

- Discussion with cardiologist. Likely vasovagal episodes. Should proceed with OT. Again, an episode under anaesthesia while monitored would (likely) at most be a sinus pause, and would be ideal opportunity to observe and document it.

- Mepolizumab Management – Discussion with Respiratory team, not relevant to perioperative infection risk, nil timing considerations. Continue as normal. (See brief review of evidence for Mepolizumab from Australian Prescriber 2017 attached).
- ? Asthma optimised – Respiratory physician reply was an emphatic yes! Please proceed, will only help further.