"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 18/11/21

TOPIC 1: Cranioplasty and IHD

70+ yo male with previous meningioma. Now for cranioplasty for cosmetic purposes.

Background:

- Meningioma – excised, followed by craniectomy for infected bone flap.
- Metastatic bowel cancer (liver met)
- AF
- IHD
    - NSTEMI Feb '21, precipitated by reduced exercise tolerance and angina.
    - On apixaban and aspirin (for AF and PCI)

Discussion

- **Should surgery proceed?**
    - Patient feels this will significantly add to his QoL
    - Plan pending for his metastatic bowel cancer, potential candidate for a partial liver resection in the future.
    - Oncologist suggests 2yr survival from the bowel cancer is reasonable (supporting decision for cranioplasty) and that this surgery won't negatively affect his liver metastasis prognosis.
    - Craniectomy can be therapeutic in the setting of previous decompressive craniectomy, speeding neurocognitive recovery. Not relevant to this patient.

- **How to manage antiplatelet and anticoagulant agents, and timing since PCI for non-urgent surgery**
    - NSx happy to perform procedure on aspirin
    - Discussed at anaesthetics-cardiology MDT – waiting until 12mth post PCI will not reduce this patient's risk of MACE, especially if aspirin is able to continue perioperatively

- Bridging not indicated. CHADS2 score = moderate risk. Evidence continues to support **no bridging** in this patient group due to increased bleeding risk *without* prevention of thromboembolic events.

Plan

- Proceed to OT.
- Continue aspirin.
- Withhold anticoagulant. No bridging therapy.

TOPIC 2: Consult – Endoleak repair

86yo male, for possible (open) fenestrated cuff repair to previous aortic stent graft due to endoleak.

Background:

- IHD
  - AMI '95, medical therapy since.
  - On aspirin/clopidogrel
  - Sestamibi (organised by vascular surgeons) shows large, fixed defect and no reversible ischaemia. EF 30-35%.
- DCM due to above (EF 35%).
- TIA 5yrs ago, no residual
- EVAR 2018
- RCRI 3-4 = elevated risk
- DASI 7.5METS, chops wood!

Issues:

- **Should surgery proceed?**
  - Appeared well at F2F review and DASI very reassuring
  - Advanced age with multiple significant comorbidities - ABS data suggests 6yr life expectancy for the average 86yo Australian male

- **Is his heart failure optimised?**
  - Discussed at cardiology meeting:
  - Biventricular pacing to improve EF? – unlikely to improve cardiac function in this patient. Indicated with wider QRS which is indicative of desynchrony.
  - Suggested addition of loop diuretic or spironolactone (doesn't clinical appear overloaded)
  - Cardiologist opinion - patient has significant IHD with a substantial effect on his cardiac function. Recommended to reconsider surgery given high risk for poor perioperative outcome.

Plan:

- For further discussion with surgeon about risks/benefits from their perspective.

TOPIC 3: **Minor urology surgery, incidental lung cancer diagnosis**

Male 77yo with a known bladder cancer for cystoscopy and diathermy.

Background:

- HTN
- COPD 48% FEV1
- Smoker – 120PYH
- Post-polio syndrome with chronic pain
- Chronic lower back pain
- Opioid tolerant ++ (160mg BD MS Contin, 10mg QID endone)

Issues:

- Incidental finding of LUL lesion (SCC ON BX)
    - T3N0M0
    - May be a candidate for curative surgery

Discussion:

- **Should surgery proceed?**
    - Similar level of morbidity to many of our urological patients
    - Minimally invasive procedure
    - Potential for significant morbidity prevention; diathermy of a small bladder cancer recurrence now will prevent large tumour (requiring larger procedure) or anaemia from bleeding at a later date
    - Low analgesia requirements so patient's existing opioid tolerance not a huge concern

- **Opportunities for optimisation looking towards possible thoracic surgery**
    - Smoking cessation
    - Opioid reduction

Plan:

- Proceed with urology procedure
- Contact GP/patient about optimisation opportunities

TOPIC 4: **Undiagnosed poor exercise tolerance, GA under MRI**

45yo female for whole body MRI. Previously attempted with oral anxiolysis due to severe claustrophobia but patient became extremely distressed. Repeat attempt booked today under GA.

Background:

- ? Myositis
    - Subjective muscle weakness since 18mths
    - CK 1500, weakly positive myositis antibodies
    - Rheumatologist advises only avenue for diagnosis is whole body MRI

    - Chest pains – CTPA negative, costochondritis, referred to cardiologist, CT heart (? CTCA) pending.
- HTN
- Asthma
- BMI 55
- Ex-tolerance 50m
- PCOS (metformin)
- Likely severe OSA (declined testing due to claustrophobia)

Discussion

- **Should procedure occur today?**
    - Not reviewed in periop clinic as these bookings do not come through the surgical services pathway
    - Non-urgent procedure given lack of progression of symptoms over 18mth time frame.
    - Rheumatologist and patient both pushing for MRI today.
    - Remote location

- **What would we optimise if review had occurred?**
    - OSA won't affect this procedure (no incision, no opioids afterwards), patient declining testing and CPAP.
    - Significant preoperative weight loss unlikely
    - Ideal to know the outcome/concerns of the cardiologist involved, documentation missing.

Plan:

- Attempt to contact cardiologist by phone. If they do not feel that severe IHD or other cardiac issue is likely, then should proceed with MRI under GA.
- If cardiologist not able to be contacted and anaesthetist feels the low exercise tolerance and chest pain have a high pre-test probability for perioperative M&M, reasonable to postpone an elective procedure for periop review.

TOPIC 5: Wegener's Granulomatosis and TEVAR

65yo male with a thoracic aortic 5.5cm descending aneurysm, endograft (fenestration for left subclavian) with rapid pacing.

Background:

- IHD
- HTN
- Recent ex-smoker
- OSA
- CKD
- Non-labelled thrombophilia (DVT/PE's 70s) on Xarelto
- DASI 5.1
- Wegener's recent diagnosis:

- 3/12 history of increasing SOB (unable to complete 1 FOS) + palpitations
- Cardiologist proceeded straight to angiogram due to high pre-test probability of obstructive CAD. Angiogram was ~ normal.
- Respiratory review – diagnosed with Wegener's granulomatosis
  - High dose prednisone improved his CXR changes/spirometry and an associated pancolitis.
  - Now on rituximab monthly

Issues

- **? Fit for surgery**
  - Immunologist says pt will never be cured from his vasculitis.
  - Aim is to wean off high dose prednisone
  - Surgeon is happy to wait
  - Graft may not be ideal with vasculitis.

Plan

- Ongoing immunotherapy
- Revisit in 3 months

TOPIC 6: Severe DCM for endovascular recanalisation

89yo lady for lower leg angiogram and popliteal recanalisation for non-healing ulcers.

Background:

- IHD – recent NSTEMI, diagnosed after prompted to see GP by clinic doctor for SOB during phone consult. 3VD. For medical mx.
- PVD – Ulcer now mostly healed while awaiting surgical mx.
- CCF – recent admission with decompensation. TTE shows severe global dysfx due to DCM, EF 20-25%. Not thought solely due to IHD (but other contributors unknown)
- CKD – eGFR 35 (likely over-estimation given her low weight)
- Ex tolerance – vacuums, shops, 1 FOS ok

Discussion

- **Proceed with lower limb angiography/plasty?**
  - Able to lie flat
  - Nothing beyond local anaesthetic needed
  - Risk of presenting for emergency procedure (e.g., partial lower limb amputations) if this low-physiologic stress, low risk procedure is avoided.

- **Optimisable?**
  - For further discussions with cardiologist given severity of CCF and recent decompensation

Plan

- Discuss with cardiologist as above
- Proceed

TOPIC 7: **AVF, multiple severe comorbidities**

39yo male for formation L RCF next week

Background:

- ESRD
    - Diabetic nephropathy exacerbated by an AKI
    - Currently dialysed through permacath. Some blockages (resolved) but nil infections.
    - Secondary anaemia – EPO, Hb 109
- T1DM
- Smoker 10/d and cannabis ++
- Malnourished, dry weight 54kg

Issues

- **Difficult phone consultation**
    - Patient extremely difficult to engage in conversation, became agitated with attempts to clarify information.
    - Unable to ascertain functional capacity
- **Poor diabetes control**
    - Multiple admissions to ICU with DKA
    - Fasting sugars 10-15. HbA1c unknown
    - Ultra-long acting/mixed insulin at midday. How to manage this perioperatively?
    - Potential for optimisation?
- **Undifferentiated HFrEF**
    - Sestamibi as part of transplant workup showed EF 30%, asymptomatic (as far as could be ascertained). New development.
    - Awaiting TTE (although pt unaware of this), no current booking, should we pursue this?

Discussion

- HFrEF
    - In absence of F2F review, preop TTE may be helpful and is a necessary step for him, it is unlikely to change management.
    - Point-of-care TTEs from ICU unable to be located
    - Could this be uraemic cardiomyopathy?
        - Classically that would present as diastolic dysfunction with hypertrophy and fibrosis, although chronic severe hypertrophy may lead to cardiomyocyte death and systolic failure.
        - Fibrosis may lead to dysrhythmias and sudden cardiac death.
        - Thought due to pressure and volume overload (HTN and anaemia), fibroblastic growth factors, chronic inflammation, systemic oxidant stress, RAA activation, insulin resistance, abnormal mineral metabolism and endogenous cardiotonic steroids.
        - Response to traditional therapies is limited.

- Endocrinologist says they have worked extremely hard to achieve the once daily ultra-long-acting insulin and no further optimisation possible.
- Profoundly depressed or cognitively impaired?
    - Services available within renal or transplant spheres?

Plan

- W/H ultralong acting insulin DOS and use insulin infusion while in hospital. Resume normal insulin with normal diet.
- Attempt to obtain TTE but don't delay surgery if not possible preop.
- Line up a procedural anaesthetist who will confidently do the procedure under regional anaesthesia only.

TOPIC 8: Bilateral TKR

67yo female booked for bilateral TKR but "not if BMI > 40"

Background:

- Severe OA in knees and feet
- Mobilises with walking stick
- HTN
- CFS 5
- BMI just under 40

Issues

- **Appropriate to do bilateral TKR**
    - Patient wishes for bilateral procedure as she is the primary carer for her husband with melanoma and was distressed at prospect of delay to second TKR
    - Frail older patient, recovery is likely to be slow, and her ability to support her husband (especially if she has a complication) may be severely impacted.

Discussion:

- Who is a good candidate for bilateral TKR?
    - ASA 1-2
    - Patients aged 50-60 or younger.

Plan:

- Discuss concerns with surgeon. Likely unilateral TKR.

TOPIC 9: Consult - Nephrectomy and cognitive concerns

83yo male with a very large renal cancer for hand-assisted laparoscopic nephrectomy. Urologists had arranged a CPET to help the decision-making process.

Background:

- HTN

- Subcortical stroke 2017
- RCC – large mass, visible externally and with a contralateral adrenal mass (likely metastasis).

Issues

- **CPET result**
    - AT 8ml/kg/min and peak VO2 11ml/kg/min = elevated perioperative risk
    - Not always used in this context as with cancer requiring urgent surgical curative treatment it may not offer additional risk stratification. Minimal opportunity for cardiorespiratory optimisation.

- **Cognitive function**
    - Surgeon noted that Patient coped well with wife present, but cognitive deficits were obvious when she was absent.
    - CPET MDT discussion prompted shared-decision making appointment at clinic
    - MMSE in clinic 12-13/30.

Discussion

- **Cognitive screening in clinic**
    - Very concerning when a patient scores 12-13/30 on MMSE, but what about 19-20/30 (a common score). Trajectory of their cognitive decline is important, speak with GP and look for geriatrician reviews or other MMSE sources.
    - This patient's MMSE was performed in front of his family which was useful in demonstrating to them clearly how frail he is.
    - Accelerating his cognitive decline postop was seen as the biggest risk for him with this surgery.

- **Goals of care/prognosis**
    - What is the role of the contralateral met in his decision making?
    - Surgery thought to be at best curative, at worst palliative (bleeding and pain from renal capsular and peritoneal stretch (regardless of malignant v. benign status).
    - PET scans not always helpful in diagnosing malignant vs. benign renal lesions, due to physiologic uptake of FDG in the kidneys. Can be useful for diagnosing metastases.
    - Adrenal lesions, benign and malignant, also have variable PET avidity due to background high metabolic activity.

Plan

- Family discussion ongoing but likely patient will decline surgery