"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 26/8/21

Attendance : Blair Mumford, Amanda Taylor, Ben Piper, Ben Porter, Libby Freihaut, Francoise Naeyaert, Mark Davies, Mike Taylor, Nikhil Patel, Roeland Passier, Viv Ho, Zi Yung Su, Gabrielle Papeix (chair), Phil Beames, Ross Kerridge, Sam Phillips, Lisa Doyle, Mel Smith, Dan Zardawi, Katie Sullivan, Michael Dobbie, Steve Pickering, Louise Hails, Jo Walsh

TOPIC 1: Coeliac stent for suspected Mesenteric angina

45yo male for an aortogram, mesenteric angiogram +/- coeliac artery stent via R CFA +/- brachial approach. Interesting case for discussion.

Background

- ? Mesenteric angina
    - Laparoscopic median arcuate ligament release 2021 due to weight loss, nausea, chest/abdominal pain.
    - Ongoing symptoms requiring admission to hospital in August – chest pain, SOB, 3 x syncopal episodes.
    - Weight loss now 25kg
    - Carotid dopplers, TTE, stress TTE, CTPA, CTB, troponins and ECG all negative.
    - ED presentation September with same symptoms after clopidogrel loading.
    - Abdominal angiography showed ongoing 90% coeliac artery stenosis
    - Plan for stent in lab 4.

- Childhood asthma
- Quit smoking 2020 (20PYH)
- Depression and anxiety

Issues

- **Unusual symptoms: any concerning causes not fully elucidated?**
    - Difficult to think of any investigation that hasn't been done!
    - Possible vagal episodes (causing syncope) due to pain

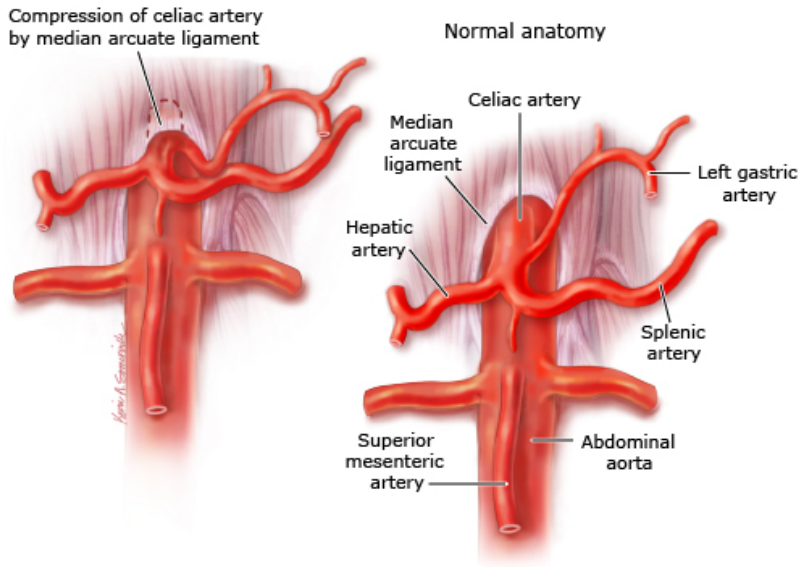
- **Procedural risks?**
    - At initial laparoscopic ligament release, substantial bleeding risk flagged to anaesthetist.
    - bleeding risk with *this* procedure?

- **Anaesthetic technique?**
    - Tempting to avoid GA given history however conversion to GA in an emergency may be challenging.

- Also potential for long ++ procedure (from limited experience from the group) making light sedation challenging.

Discussion

- **What is median arcuate ligament syndrome? (from Uptodate)**
  - A.k.a. coeliac axis syndrome, coeliac artery compression syndrome, Dunbar syndrome.
  - Recurrent abdominal pain related to compression of the coeliac artery by the MAL.
  - Symptoms may be ischaemic or neuropathic.
  - Triad: post-prandial abdominal pain, weight loss, abdominal bruit.
  - 30yo+, 4 x more common in women
  - Careful patient selection for intervention needed, as may be an incidental finding in asymptomatic people, or not clearly related to symptoms due to another cause.
  - Treated initially with a laparoscopic ligament release. Second line treatments include ganglionectomy, percutaneous revascularisation or surgical revascularisation.



Plan

- Procedural anaesthetist notified -> will discuss bleeding risks with surgeon on the day and have blood available in lab 4 if thought prudent (nil previous Abs)
- GA thought to be safe and appropriate
- Nil further investigations

TOPIC 2: Severe HOCM and facial cancer recurrence

73yo male with a local recurrence of SCC around the cheek/infra-auricular area.

Background

- Facial SCC - WLE, neck dissection and radiotx March.
- DASI 6.6 METS

- PD – minor speech and swallowing changes
- Polycythaemia rubra vera – hydroxyurea and venesections q3/12
- Iron deficiency anaemia
- NHL – Chemotx, treated

Issues

- HOCM
    - Known since 2016, mod on TTE
    - Cardiologist review due to 6/12 history of worsening SOB
    - SOB and angina with slight inclines
    - TTE Aug '21 showed severe LVOT obstruction, gradient 86mmHg
    - Cardiologist commenced beta-blocker
    - Ongoing review – Holter to look for ventricular tachydysrhythmias, ? will need defib, ? add disopyramide.
    - Family to be referred for genetic testing

- Timing of procedure
    - Ongoing cardiac workup and modification
    - Surg team keen to avoid delays where possible, due to previous local metastasis

- Anaesthetic technique – surg reg suggests could be done under LA
- Airway
    - Moderately difficult BMV and grade 2 laryngoscopy in March
    - Patient notes reduced MO since radiotx

Discussion

- Anaesthetic technique
    - LA spread may be unreliable due to previous surgery
    - Concerns about sedation with likely difficult airway if conversion to GA required mid-case
    - Low physiologic stress procedure. Stress not appreciably reduced by loco-regional technique rather than GA.
    - HD stability desirable with HOCM

- Timing
    - Thought that if Holter reassuring and asymptomatic from recent beta-blocker addition, then appropriate to proceed without delays to cancer surgery.
    - Likely that the degree LVOT obstruction is unchanged since previous anaesthetic in March, which was well tolerated.

Plan

- Discuss Holter result with cardiologist - further treatment adjustment needed? disease severity likely stable since March.
- Notification of procedural anaesthetist – airway assessment and plan on DOS. Patient aware that AFOI may be required.

TOPIC 3: Recent PCI v. base of tongue cancer

Incidental finding of PET-avid lesion at base of tongue, thought likely to be cancer. PET scan arranged due to incidental finding of RLL lesion during CTPA (RLL lesion not PET-avid, non-concerning)

Background

- IHD – recent angina (not ACS), 90% LAD lesion 2 x stents placed 2/7 ago. Surgery planned in 1wk. Symptoms now resolved.
- Indigenous
- Ex-heavy smoker
- HTN
- ? OSA – high STOPBANG but low ESS
- High BMI
- Ex-tol > 4 METS

Issues

- Surgery timing
    - Usually the minimum time frame between PCI and surgery is 1/12 (based on most recent evidence J Am Coll Cardiol 2016;68:2622–32 and NEJM DOI: 10.1056/NEJMoa2108749) however this is cardiologist dependent. Other relevant factors – stent location, number, caliber, overlaps, branching.
    - See attached article
    - Discussions documented between surgical and cardiology teams suggest that everyone is in agreement with a plan for surgery and cessation of DAPT for 7d prior.

Discussion

- Patient at high risk of stent thrombosis if surgery proceeds now.
- Availability of emergency PCI on site is ideal, however being an LAD lesion, stent thrombosis may be fatal due to large myocardial territory at risk.
- Could aspirin be continued at the minimum?
- Would TTE be beneficial?
    - Reassuring exercise tolerance and absence of any symptoms.
    - Long term LAD ischaemia can lead to significant LV dysfx.
    - Low risk/stress surgical procedure

Plan

- For discussion with surgical and cardiology teams to ensure that there has been no miscommunication about the timeline and to query if aspirin, at least, could be continued.
- For TTE if time allows but wouldn't delay surgery to obtain.
- *Update: Cardiologist contacted – unaware that the procedural cardiologist had stented the vessel (rather than just angiography) and so yes, surgery will need to be delayed for 1/12 of DAPT.*

TOPIC 4: Myotonic dystrophy risk, peripheral hospital

26yo female for laparoscopic cholecystectomy at a small peripheral hospital.

Background

- Myotonic dystrophy type II "carrier" (based on genetic testing)
    - Father developed symptoms at 60yo
    - Thought likely that this patient will have the same progression, but currently asymptomatic
    - Uneventful muscle relaxant anaesthesia previously.

- Open ASD repair '20. Incidental finding after Ix for atypical chest pain.
- Normal TTE post ASD repair.
- Neuropathic chest wall pain
- 3 x episodes of cholecystitis requiring hospitalisation

Issues

- Correct care location (small peripheral hospital, no ICU)

Discussion

- **Care location**
    - Reassured by absence of clinical symptoms of MD and by recent uneventful anaesthetics

- **Surgery needed?**
    - Multiple hospital admissions. Consensus was that surgery should proceed or more severe episodes and requirement for emergency procedures will ensue.

- **What are myotonic disorders?**
    - Persisting active muscle contraction after cessation of effort.
    - Myotonic dystrophy is the most common form, caused by altered chloride conductance.
    - Onset usually in 20-40s, death by 50-60s
    - Extramuscular features include
        - CVS: conduction abnormalities, cardiomyopathy, mitral valve prolapse
        - RS: restrictive defect, OSA
        - Other: delayed gastric emptying, dysphagia, hypothyroidism, DM, intellectual impairment, baldness, testicular atrophy.
    - Obstetric implications: exacerbation of muscular and CVS effects, uterine dysfx leading to CS and PPH, preterm labour.
    - Anaesthetic implications:
        - Avoid exacerbants: cold, shivering, DMR, surgical manipulation and diathermy
        - Resistance to NDMR
        - High muscle tone despite regional anaesthesia
        - AChE may provoke contraction
        - CVS/RS depressant sensitivity
        - MH association
        - Aspiration risks

Plan

- Proceed with surgery as planned.

TOPIC 5: **Update – Super Morbid Obesity for hysterectomy**

26yo, 197kg, female with grade 1 endometrial cancer for laparoscopic hysterectomy after failed treatment with Mirena for endometrial cancer.

Background:

- Endometrial cancer - being treated with mirena/curettes.
- Nulliparous woman, keen to have children, may do so via surrogate with egg donation.
- 2 x previous same procedure - one under GA igel 5, one under sedation with THRIVE. Both nil issues
- OSA
    - Overnight oximetry with ODI 48/hr and witnessed apnoeas.
    - Did not attend for review by respiratory physician despite repeated attempts from team.
    - HCO3 and PaCO2 normal on ABG, so no e/o obesity hypoventilation
- High BMI ++

Update:

- **Weight reduction surgery**
    - Surgery possible locally under the umbrella of 'severe reflux surgery' (allowing gastric bypass) or with support from a local MP (allowing a gastric sleeve)
    - GP to refer to local public surgeon
    - Wait time ~ 12mths which allows substantial engagement with the service's dietician, which is critical to success of the procedure
- **Gynae surgery**
    - Occurred several weeks ago.
    - Combination of intra-abdominal laparoscopic and per-vaginal endoscopic ("natural orifice surgery") approaches used which allowed minimisation of Trendelenburg requirements and abdominal insufflation pressures, both of which were poorly tolerated due to this patient's body habitus.
- **What is Natural Orifice Transluminal Endoscopic Surgery (NOTES) (from Uptodate)**
    - Developed in 1990s
    - Initial route was per-gastric however other orifices used include transanal, transvaginal, transurethral/transcystic, and transoesophageal.
    - Has been used for peritoneal explorations, pancreatectomy, splenectomy, nephrectomy.
    - Hypotheses
        - A hole in a viscus may be better tolerated than in the abdominal wall, leading to less pain, adhesions, hernias.
        - Absence of cosmetic scar

        - Better access to certain areas, especially in the super obese patient (*relevant in this patient*)
        - Possibly shorter hospitalisations and healthcare costs
    - Concern persists around risks of bacterial contamination and abscess formation.
    - Low incentive to move from the experimental phase (in most instances) due to lack of standardisation/protocols, training, and requirement for specialised instruments.