"From the Trough"

Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 28th March 2019. Publication date 2nd April 2019.
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: Aortic stenosis

CASE 1:

88 year old female presented to the preoperative clinic for proposed radiofrequency ablation to the left trigeminal nerve for trigeminal neuralgia. She reports intolerable pain that makes her life unbearable at times.

Her background medical history includes:

1. Severe Aortic stenosis
   - Recent echo AVA 0.6cm2/DTI 0.19 with normal LVEF
   - Last cardiology review – May 2018. Refused surgical review and consideration of TAVI in Sydney
2. Chronic kidney disease
   - eGFR 34 ml/kg/m2
3. Multinodular goitre – treatment with radioactive iodine

She reports an exercise tolerance of 100m on the flat. She reports that showering is a significant undertaking, with breathlessness and multiple rests. She denies angina, syncope and orthopnoea. Her current medications are metoprolol and telmisartan. She reports significant intolerances to other pain medications. On examination she has a systolic murmur of AS and mild ankle oedema. Her ECG demonstrates SR at a rate of 75 bpm.

Discussion:-

- Are there other options for pain management? Her situation was discussed with Mark Davies for consideration of peripheral nerve block and steroid injection (Sphenopalantine block). This may offer less invasive pain relief and can persist in the medium term. She has an organised follow-up planned with Mark.
- Should she have her valve fixed prior to surgery? There was much discussion about the risks of non-cardiac surgery with severe AS, and how it impacts on outcomes.
- The most quoted trial is Agarwal et al (2013). They conducted a propensity matched trial of patient's with moderate or severe AS having surgery in the US. While surgery can be performed there is higher risks.

We matched 634 patients with AS undergoing NCS to 2536 controls. There were 244 patients with severe AS and 390 patients with moderate AS. Thirty-day mortality was 2.1% for AS patients compared with 1.0% in non-AS controls (P=0.036). Postoperative myocardial infarction was more frequent in patients with AS compared with controls (3.0% versus 1.1%; P=0.001). Combined primary outcome was significantly worse for both moderate and severe AS patients compared with respective controls (4.4% versus 1.7%; P=0.002; and 5.7% versus 2.7%; P=0.02, respectively). High-risk surgery, symptomatic severe AS, coexisting mitral regurgitation, and pre-existing coronary disease were significant predictors of primary outcome in patients with AS.

- This lady has been referred back to her cardiologist for review. In particular she was previously resistant to consideration of TAVI due to having to travel to Sydney. We informed her and her family that TAVI was available in Newcastle, and that the procedure will improve her morbidity and mortality for future non-cardiac surgery, and also for life. The expected minimal time from referral to TAVI is 3 months. TAVI does require contrast CT studies, however renal impairment is not a contra-indication as the CT studies can be performed with modified protocols.

Reference:-

Agarwal S, Rajamanickam A, Bajaj NS, Griffin BP, Catacutan T, Svensson LG, et al. Impact of aortic stenosis on postoperative outcomes after noncardiac surgeries. Circ Cardiovasc Qual Outcomes. 2013;6(2):193-200.

CASE 2:

65 year old male seen in preoperative clinic for shoulder decompression and rotator cuff repair.

His background history includes

- OSA – on home CPAP
- Obesity
- Moderate AS – last echocardiogram 2017

He was referred for repeat echocardiogram from the preoperative clinic. The results were : severe aortic stenosis with a bicuspid aortic valve (mean PG 46mmg, AVA 1.0cm2). There was normal LV function and no significant dilatation of the ascending aorta. He remains asymptomatic with good exercise tolerance including gardening and lawn mowing.

His case was discussed at the Cardiology meeting. The recommendations were:

- No indications for AVR at present (no symptoms, normal LV function)
- He should be followed up with his cardiologist with echocardiogram 6 monthly
- His bicuspid valve makes TAVI less suitable, unless in very high risk patient group

Discussion:-

- Why is this patient different? No symptoms and therefore does not meet the guidelines for AVR (see attached). The decisions are based on risks vs benefits of AVR, and the life span of the AVR.
- Bicuspid valves – are not generally suitable for TAVI due to the different shape of the aortic annulus in bicuspid aortic disease. This makes the deployment of the valve more difficult and the risks of paravalvular leak higher. Outcomes after TAVI are worse with higher degrees of paravalvular leak.

Topic 2: Obesity

CASE 1:

60 year old male seen in Belmont clinic for colonoscopy. BMI 60, weight 195 kg. He was referred following a positive FOBT.

Medical history includes:

- OSA – home CPAP for 25 years
- Type 2 Diabetes Mellitus – OHG
- Hypertension
- 40 pack year smoking history

His medications include : indapamide, metformin, tarka (verapamil and trandolapril), esomeprazole, prednisolone prn and panadol osteo prn.

Discussion:-

- Is he suitable for Belmont?? All agreed that this patient would NOT be suitable for Belmont
- Should he proceed to colonoscopy? There was much discussion around whether he would be appropriate, particularly if he would be appropriate for any further surgery should a lesion be found. Some argued that THRIVE makes this less complicated.
- Should surgery be deferred for weight loss, and if so for how long? There were many opinions. All agreed decision would need to be in consultation with surgical team.
- Are there other options to investigate? Options offered include CT colonography.
- This case will be discussed further with the surgical team and a plan developed

Topic 3: Unexplained dyspnoea

CASE 1:

74 year old male seen in the preoperative clinic for planned cystoscopy, ureteroscopy, laser lithotripsy and change of stent.

His medical history includes:

- Hypertension
- Type 2 Diabetes – OHG and insulin. Last HbA1c 9.0% 2018
- Prostate Cancer – radiotherapy
- Thyroidectomy
- Recurrent renal stones – episodes of urosepsis
- Recent back injury with L1 fracture

Medications include: pantoprazole, atorvastatin, venlafaxine, vitamin D, atenolol, thyroxine, gliclazide and insulin.

His major issue was increased breathlessness on minimal exertion in last 3 months. He was noted to be SOB on moving into the room on a 4WW. He reports needing to lie down after a shower. On examination there was no significant cardiorespiratory findings. His ECG and bedside spirometry were normal. Should he proceed? What additional investigations should be performed?

Discussion:-

- Additional investigations discussed include –
    - Echocardiography – although no clinical findings
    - Formal spirometry with TLCO
    - Non-invasive stress imaging for myocardial ischaemia – sestamibi scan
    - Pathology and TSH
    - BNP
- All of the above investigations were normal! Is there a role for CPET testing? CPET is an ideal test for dyspnoea of uncertain etiology.
- There was much discussion about the pros and cons of pursing this test prior to low risk surgery. Given that his BNP and sestamibi scan were normal, he would be risk stratified as low risk for proceeding to surgery.
- The consensus was to proceed to surgery at this time.
- It was noted that his last HbA1c was elevated. Given the surgery is low risk surgery, the recommendation is to proceed. His diabetes management should be reviewed with his GP.