"From the Trough"

Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 11th April 2019.
Publication date 15th 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.

CASE 1: BRONCHIAL THERMOPLASTY

52 year old male referred for consultation for anaesthesia for Bronchial Thermoplasty procedure under Respiratory Physicians. His medical history

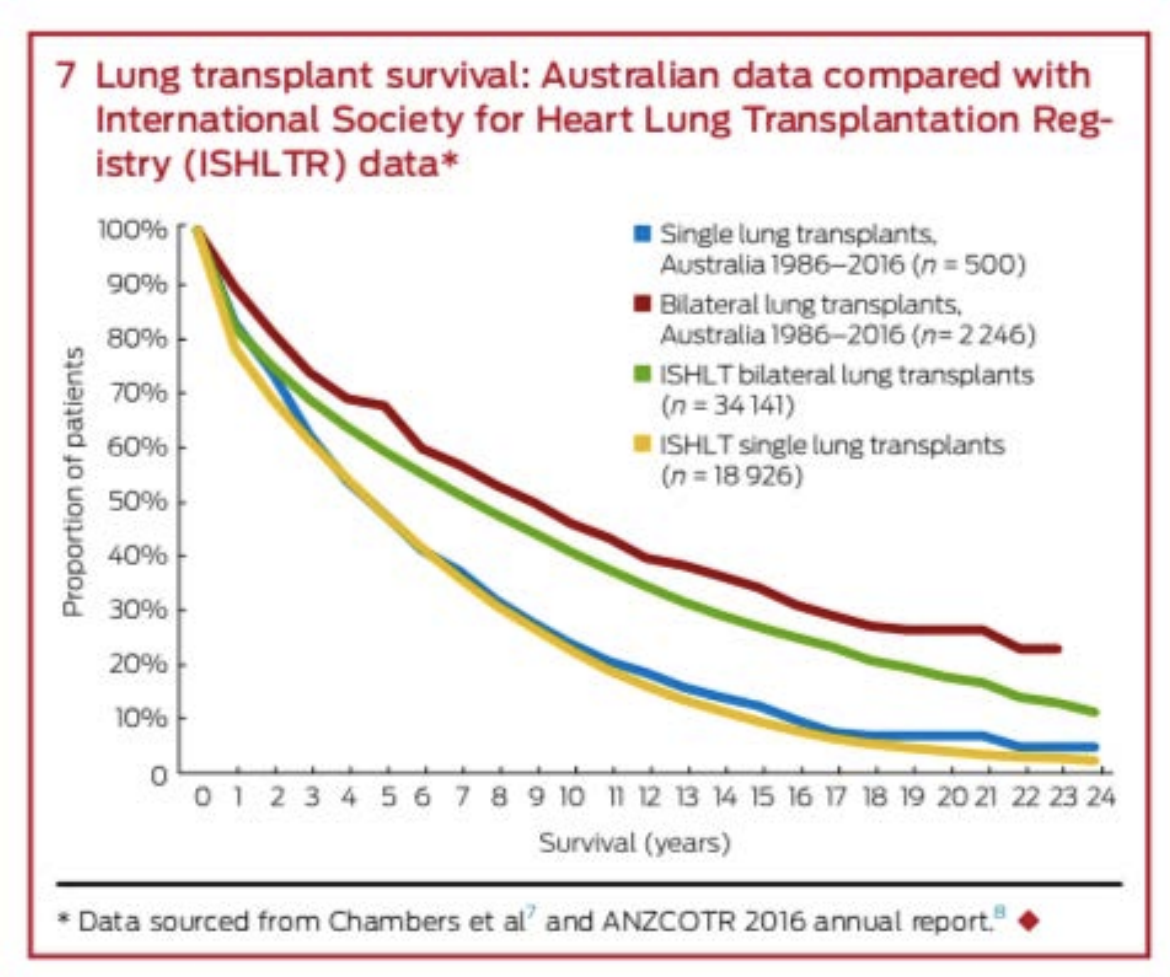
1. Severe persistent neutrophilic asthma
   - FEV1/FVC = 0.84/2.64L. FEV1 = 22% of predicted.
   - Bronchodilator, steroid and omalizumab treatment
2. Renal stones
   - Cystoscopy and stent under GA in 2018 – Canberra

He reports 1-2 admissions to hospital per year, however no previous admissions to ICU for his asthma and has not required NIV for treatment. His current exercise tolerance is 100m. He does not drink or smoke. His current medications include: bronchodilators, prednisone, azithromycin, and omalizumab. He is allergic to dust mites.

He was offered this procedure to slow his decline in respiratory function. The alternative was referral for lung transplant.

Discussion:-

- There is some evidence to support this treatment to slow the worsening of lung function (see attached paper on Bronchial thermoplasty).
- The treatment requires 3 general anaesthetics. There is some local experience. The preference is for TIVA anaesthesia from the Respiratory physicians.
- Patients generally have steroid cover pre and post-operatively.
- The alternate treatment - lung transplantation, is an option. Long term survival rates for lung transplant are approximately 50% at 5 years. The patient is aware of this data (see graph below), and wishes to delay transplant until as late as possible. Bronchial thermoplasty does not preclude lung transplant in the future.



CASE 2: CONSULTATION VIA AEROPLANE

70 year old female referred to Perioperative service for consult for L3/4 and L4/5 interlaminar decompression.

Her medical history includes:

1. Rheumatoid arthritis
   - Known to rheumatologist
   - Managed with Methotrexate, Hydroxychloroquine, prednisone and tocilizumab
2. COPD
   - FEV1 1.05L (47% predicted)
   - Still smoking, > 60 pack year history
   - Uses puffers regularly
3. DVTs
   - Ceased NOAC March 2019
4. Obesity
   - BMI 36

She is limited with her mobility due to pain. She uses a wheelchair for any significant distance. Her medications include: Methotrexate, Hydroxychloroquine, prednisone, tocilizumab, amitriptyline, fluticasone, folic acid, frusemide, irbesarten, norspan patch, omeprazole, tapentadol and targin. She is allergic to shellfish.

Her ECG and echocardiogram were unremarkable, and her spirometry demonstrated mild obstruction on treatment. She has been recently reviewed by Cardiologist and Rheumatologist, they have suggested that there is no contra-indications to proceeding to surgery.

Due to her pain, she was going to be transferred via fixed wing aeroplane to the preoperative clinic! We were able to intervene and organise our colleagues in Tamworth to review the patient.

Discussion:-

- Those present agree that seeing the patient in Tamworth was the most sensible use of resources.
- They agreed that she should stop smoking before elective surgery
- Her tocilizumab for rheumatoid arthritis should be ideally stopped 2 weeks preoperatively (see attached summary of Perioperative management of antirheumatic medication, including immunomodulators). This will be discussed with her Rheumatologist.

CASE 3: HIGH RISK SURGERY

75 year old female reviewed for hepatico-jejunostomy for cholangitis (with >100 biliary stones). She is a current inpatient at JHH. Her medical history includes:

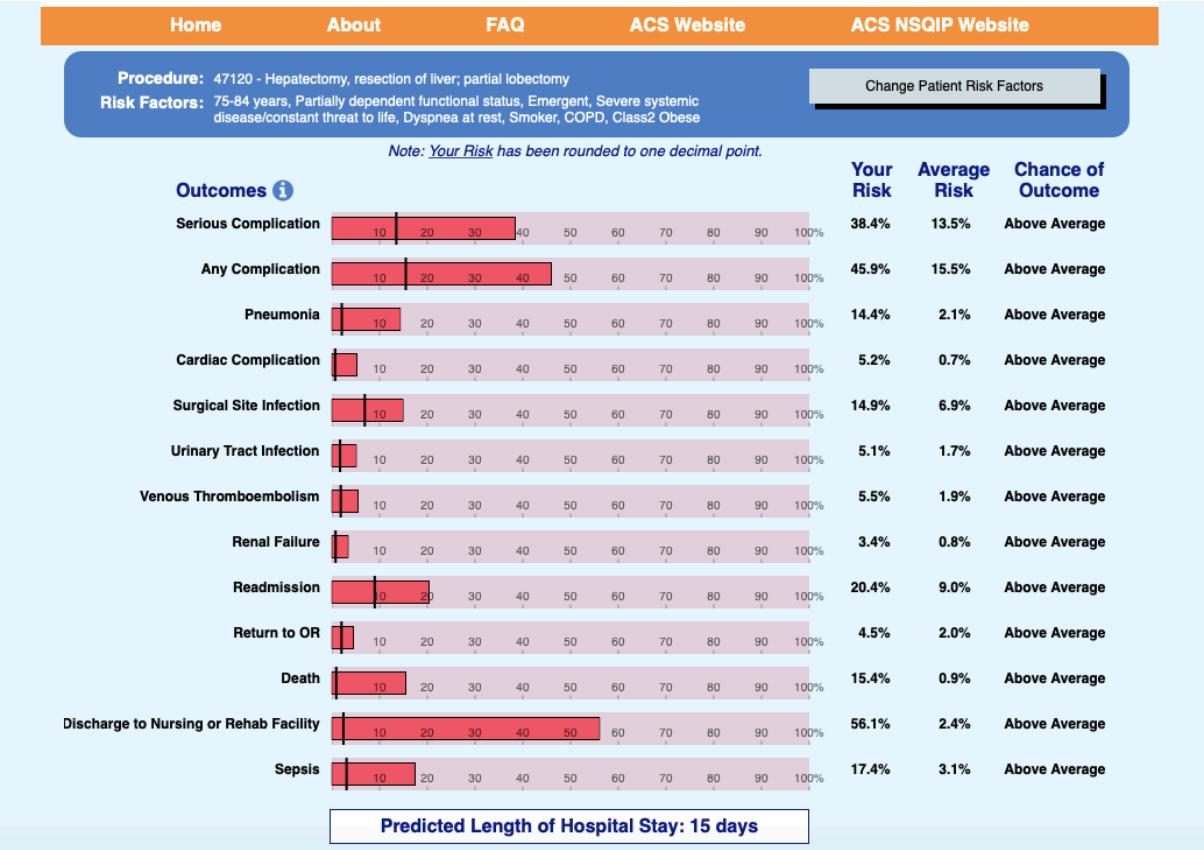
- COPD/Asthma
  - FEV1 = 0.71L (42% predicted). Ration 71%
- Smoker
  - > 50 pack years. Still smoking.
- Left mastectomy and axillary clearance. Left arm movement now restricted.
- Partially dependent. Lives with daughter, mobilises 20m on 4WW.

She was reviewed and a respiratory consultation was requested to optimise her respiratory function. An echocardiogram is requested to determine her cardiac function, pulmonary pressures and if any CCF was possibly contributing to her SOB.

Discussion:-

- Very high risk patient having high risk surgery. Her risk was calculated using NSQUIP. Her risk of death was 15%, any complication 45% and discharge to nursing care or rehab 56% (see graphs below)
- Her risk of death in the next 4 years was estimated with the BODE index for COPD. Her risk is of death is 67%. It was noted that this is the 2nd highest score.

- It was noted that there is limited short term treatments available aside from stopping smoking and bronchodilators. Pulmonary rehabilitation can improve patient outcomes in the longer term.
- The patient had said that she did not want to be dependent in a nursing home.
- There was consensus that her management should ideally be the least invasive possible. If she can be managed with ERCP this should be the initial approach. The surgical team have said that she may need repeat ERCP to manage condition, which would be reasonable. Any future consideration for surgical approach needs significant review of the risks and benefits.



CASE 4: CONGENITAL HEART DISEASE

13 year old female with atrioventricular septal defect with Fontan circulation. Diagnoses of moderate pulmonary hypertension (on Sildenafil), CCF, Down's syndrome and OSA. Previous cardiac surgery for Damus procedure and AVR. Now taking warfarin. She presented for Hysteroscopy, D and C and Mirena insertion for heavy menstrual bleeding.

The surgical team is uncertain if this treatment will be successful and have suggested that an abdominal hysterectomy may be required.

Discussion:-

- Heavy menstrual bleeding in this setting is likely related to high venous pressures due to CCF and warfarin.
- Mirena insertion will reportedly stop menstruation in 20% of patients. It may reduce bleeding in a further number.
- Can ketamine be used in pulmonary hypertension? There was much debate on the theoretical risks. It was noted that many use it regularly in patients with significant pulmonary hypertension. Nick Roberts reported his experience of large oral midazolam and fentanyl oral premedication for paediatric congenital cardiac surgery in Melbourne.
- The pros and cons of referring this patient to Sydney for her hysterectomy were discussed.
- Note: Nick Roberts appeared recently on Australian story while assisting in the anaesthesia of Bhutanese conjoined twins separated at RMH!