"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 30/9/21

Attendance : Paul Healey, Ross Kerridge, Gabrielle Papeix, Lisa Doyle, Ed Ho, Sarah Armarego, Keith Streatfeild, Dan Chilton, Steve Bruce, Jess Gani, Viv Ho, John Hollott, Annabel Whitaker, Viv Ho, Rhys Thomas, Mark Davies, Ben Porter, Pragya Ajitsaria, Tom Martin, Amanda Taylor, Steve Pickering, Blair Munford, Phil Beames, Myf Painter.

TOPIC 1: Multiple Procedures required, which takes precedence?

- 69-year-old lady for TURBT.
- Incidental finding of large bladder tumour on surveillance imaging. No haematuria/obstructive symptoms

Background:

- Non-small cell lung cancer – Stage IV with Brain metastases, complete response to palliative radiotherapy
- Right parapharyngeal mass on previous surveillance PET.
- Asymptomatic. Biopsy showed atypia but ENT surgeons concerned about change in size and shape of mass.
- Listed for parotidectomy (cat 2)

Issues

- COPD, moderate disease FEV1/FVC = 0.6 (79%). 50 pack year smoking history
- Significant deconditioning; 3.9 METS on DASI. Walks 20-30m with stick or 4WW
- Clinical depression with suicidal ideation. Rarely leaves home
- Iron deficiency
- Reviewed at perioperative clinic 6/12 ago
- Referred for prehab, very motivated family but on hold currently due to COVID
- No change since last clinic review

Discussion

Which Surgery Should Proceed First?

- Consensus that TURBT should occur
- Large bladder tumour with potential for obstructive symptoms
- Urologist is aware of patient limitations and prepared for a debulking procedure if surgery is technically difficult
- ENT procedure needs to be done but pharyngeal mass not malignant and remains asymptomatic
- Imperative to update ENT surgeons of delay of at least 6 weeks

Optimisation options

- Clinical issues - deconditioning and Fe-deficiency both being addressed
- Depression is severely impacting functional capacity
- Prehabilitation – psychological as well as physical benefits; social aspect advantageous in isolated people
- GP manages depressive symptoms, on multiple pharmacotherapies with little effect
- Letter to GP in May regarding possibility of specialist input but nil yet.
- Psychiatry and psychology services currently very difficult to obtain

Plan:

- Fe-infusion and proceed to TURBT
- GP letter regarding psychiatrist and/or psychologist for optimisation of mental health symptoms
- Prehab can occur pre-ENT surgery
- Discussion with family around Advanced Care Planning

TOPIC 2: Von-Willebrand Disease and Elective Gynaecological surgery

60-year-old lady for laparoscopic BSO - Preventative surgery

Background

- Family history of Ovarian Cancer
- Mild Asthma - No admissions or steroids.
- Hypertension - single agent

Issues

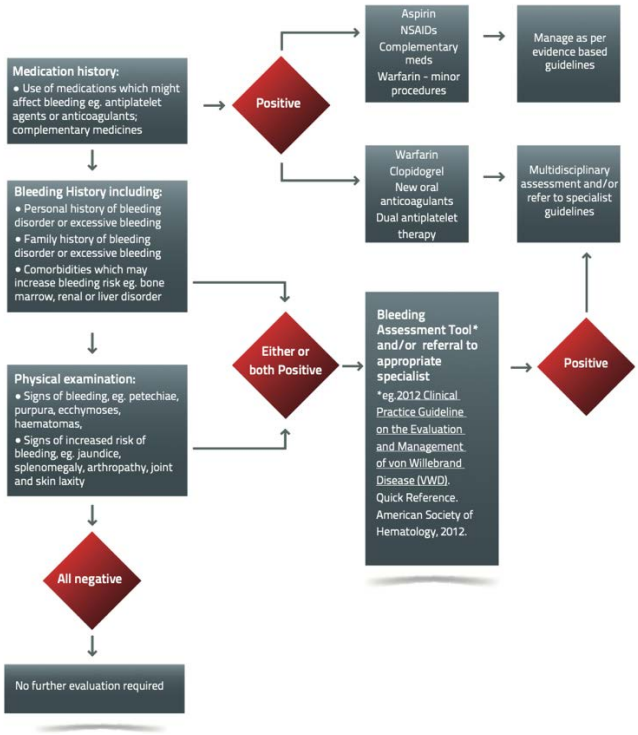
- Bleeding Disorder - Patient unsure of name of condition, knows it is a platelet problem.
- Normal FBC and Coagulation Screen
- VWD most likely diagnosis
- First diagnosed 30 years ago - presented with epistaxis
- PPH after all births
- Life-threatening intraoperative haemorrhage requiring massive transfusion and ICU admission following elective D&C/Cone Biopsy
- Brother died following post-tonsillectomy bleed
- Telehealth Consult with haematologist recently - No letter available. Patient states they recommended Tranexamic acid and platelet cover preoperatively and oral tranexamic acid for 10 days postoperatively
- Concern about possible transfusion reaction - describes dyspnoea and lip swelling during massive transfusion episode
- Undergone 2 subsequent orthopaedic procedures with no bleeding - femoral nail in Japan and revision of femoral nail in Sydney. Both procedures performed under platelet cover.

Discussion

Coagulation Screening in Perioperative Clinic

- Few indications for routine perioperative testing
- https://perioperative.files.wordpress.com/2021/07/pre-operative-pathology-testing.pdf

- Discussion centred around taking an adequate bleeding history to determine requirements for further pathology testing/haematologist advice
- National Blood Authority Australia recommends standardised approach via a Bleeding Assessment Tool (BAT) as outlined in the following guideline:



- **https://www.blood.gov.au/system/files/documents/preoperative-bleeding-risk-assessment-v5.pdf**
- https://bleedingscore.certe.nl/ See case below for example of a BAT

Transfusion reaction

- Most likely scenario is symptoms were attributable to massive transfusion
- Early Group and screen for antibodies to identify any specific blood requirements preoperatively

Role for Thromboelastography?

- Evolving research in this area, especially in the acute and perioperative settings.
- TEG parameters of K-time and MRTG have been found to be effective in detecting patients with vWF:Rco < 30IU/dL (Diagnostic value <60)
- See attached article on bleeding disorders and anaesthesia

Plan

- Chase Haematologist letter and inform local team preoperatively to ensure we have all possible products required
- Postpone surgery for shortest possible time until haematology review occurs.
- CEACCP article on Anaesthetic considerations in patients with inherited disorders of coagulation. doi:10.1093/bjaceaccp/mku007

TOPIC 3: Hysteroscopy with potential undiagnosed bleeding disorder

43-year-old lady for Hysteroscopy/D&C

Background:

- Asthma and upper airway dysfunction - stable disease, well-controlled with inhaled therapies and regular respiratory review
- Cannabis smoker – daily

Issues

- Abnormal uterine bleeding - menorrhagia for 3/52 each month, using 6+ pads per day
- Bleeding significantly affecting QoL; unable to work, take children swimming.
- Fe-deficiency, no anaemia. 3 monthly iron infusions.
- Positive bleeding history - epistaxis x2 per week. Gum bleeding when brushes teeth.
- International Society of Thrombosis and Haemostasis (ISTH) Bleeding score = 4

	SCORE				
SYMPTOMS (up to the time of diagnosis)	0§	1§	2	3	4
Epistaxis	No/trivial	- > 5/year or - more than 10 minutes	Consultation only*	Packing or cauterization or antifibrinolytic	Blood transfusion or replacement therapy (use of hemostatic blood components and rFVIIa) or desmopressin
Cutaneous	No/trivial	For bruises 5 or more (> 1cm) in exposed areas	Consultation only*	Extensive	Spontaneous hematoma requiring blood transfusion
Bleeding from minor wounds	No/trivial	- > 5/year or - more than 10 minutes	Consultation only*	Surgical hemostasis	Blood transfusion, replacement therapy, or desmopressin
Oral cavity	No/trivial	Present	Consultation only*	Surgical hemostasis or antifibrinolytic	Blood transfusion, replacement therapy or desmopressin
GI bleeding	No/trivial	Present (not associated with ulcer, portal hypertension, hemorrhoids, angiodysplasia)	Consultation only*	Surgical hemostasis, antifibrinolytic	Blood transfusion, replacement therapy or desmopressin
Hematuria	No/trivial	Present (macroscopic)	Consultation only*	Surgical hemostasis, iron therapy	Blood transfusion, replacement therapy or desmopressin
Tooth extraction	No/trivial or none done	Reported in ≤25% of all procedures, no intervention**	Reported in ≥25% of all procedures, no intervention**	Resuturing or packing	Blood transfusion, replacement therapy or desmopressin
Surgery	No/trivial or none done	Reported in ≤25% of all procedures, no intervention**	Reported in ≥25% of all procedures, no intervention**	Surgical hemostasis or antifibrinolytic	Blood transfusion, replacement therapy or desmopressin
Menorrhagia	No/trivial	Consultation only* or - Changing pads more frequently than every 2 hours or - Clot and flooding or - PBAC score>100#	- Time off work/school > 2/year or - Requiring antifibrinolytics or hormonal or iron therapy	- Requiring combined treatment with antifibrinolytics and hormonal therapy or - Present since menarche and > 12 months	- Acute menorrhagia requiring hospital admission and emergency treatment or - Requiring blood transfusion, Replacement therapy, Desmopressin, or - Requiring dilatation & curretage or endometrial ablation or hysterectomy)
Post-partum hemorrhage	No/trivial or no deliveries	Consultation only* or - Use of syntocin or - Lochia > 6 weeks	- Iron therapy or - Antifibrinolytics	- Requiring blood transfusion, replacement therapy, desmopressin or - Requiring examination under anaesthesia and/or the use of uterin balloon/package to tamponade the uterus	- Any procedure requiring critical care or surgical intervention (e.g. hysterectomy, internal iliac artery legation, uterine artery embolization, uterine brace sutures)
Muscle hematomas	Never	Post trauma, no therapy	Spontaneous, no therapy	Spontaneous or traumatic, requiring desmopressin or replacement therapy	Spontaneous or traumatic, requiring surgical intervention or blood transfusion
Hemarthrosis	Never	Post trauma, no therapy	Spontaneous, no therapy	Spontaneous or traumatic, requiring desmopressin or replacement therapy	Spontaneous or traumatic, requiring surgical intervention or blood transfusion
CNS bleeding	Never			Subdural, any intervention	Intracerebral, any intervention
Other bleedings^	No/trivial	Present	Consultation only*	Surgical hemostasis, antifibrinolytics	Blood transfusion or replacement therapy or desmopressin

- Normal range is <4 in adult males, <6 in adult females and <3 in children

Discussion

Preoperative interventions required?

- Discussed with haematology registrar, unusual pathology results; Factor VIII levels and antigens supra-normal indicating vWD unlikely
- Normal Full Blood Count, APTT slightly raised at 39
- Interestingly, lupus anticoagulant and fibrinogen were raised which would indicate a propensity for clotting rather than bleeding
- Urgent Haematology appointment organised - unlikely to occur preoperatively. Public outpatient system under pressure at present
- Consensus that it would be reasonable to proceed with above procedure

Surgical Options

- Discussed with Gynaecology Fellow, agreed it is important to address bleeding while awaiting further haematology review
- Options for Mirena will be presented to patient as a short-term management

Plan:

- Proceed to surgery
- Haematology review pending

TOPIC 4: Immunosuppressant Agent Management for Elective Major Joint Surgery

64-year-old lady for left shoulder second stage revision/replacement

Background

- Infected Left shoulder replacement - long hospital admission with multiple washouts/removal of hardware/insertion of spacer
- Colonised with pseudomonas

Issues

- Severe asthma - multiple admissions to ICU postoperatively with Type 1 Respiratory failure requiring NIV
- NYHA Class 3 dyspnoea. Daily Ventolin x3. Regular prednisolone requirement
- Recently commenced Mepolizumab immunotherapy with excellent response in symptoms and no steroid requirement
- Novel therapy, not frequently encountered perioperatively

Discussion

Management of Mepolizumab

- Ideal situation would be to continue given significant improvement in respiratory symptoms however uncertain effects on wound healing, infections rate with major joint surgery
- Absence of literature online
- Discussed with prescribing physician - Mepolizumab is a monoclonal antibody which targets human IL-5 with high affinity and specificity. IL-5 is the major cytokine responsible for the growth, differentiation, activation, and survival of eosinophils.
- Respiratory physician recommends continuation of therapy and has emphasized that there are no effects on neutrophils or other white cells

Plan

- Continue Mepolizumab as advised
- Discuss above with orthopaedic surgeons

TOPIC 5: Ward Consult: PLIF with untreated Cirrhosis

51-year-old female for consideration of Posterior Lumbar Interbody Fusion for acute pain management

Background

- Osteomyelitis and Discitis - current inpatient for pain management
- Multiple vertebral crush fractures
- E-coli bacteraemia - resolving
- No nerve root impingement/neurological symptoms

Issues:

- COPD - current smoker. No formal spirometry
- Severe pulmonary hypertension and Tricuspid Regurgitation. Likely Cor-pulmonale
- Exercise tolerance - 50m on flat
- Recent ex IVDU with untreated Hepatitis C
- Childs-Pugh 3 Cirrhosis. Diagnosed following an upper GIH, gastroscopy showed varices.
- No regular gastroenterology follow-up or treatment

Discussion

Perioperative Optimisation

- Consensus that this is a high-risk patient and procedure.
- Undefined bleeding risk, need to assess preoperatively
- Gastroenterology advice should be sought preoperatively

Less invasive Surgical Options

- Main advantage to PLIF is analgesia, no neurological symptoms
- Neurosurgeon feels that vertebrae will self-fuse in coming weeks to months and results will be similar
- On discussion of co-morbidities surgical team have decided the procedure is currently too high risk for the indication

Plan:

- Delay currently
- Neurosurgical team to organise Gastro consult

TOPIC 6: AFOI in Belmont?

2 cases of removal of maxillofacial metalwork from patients with potentially difficult airways.

Discussion

- AFOI raised as a possible technique
- Concern from Belmont staff that it is not a technique that they perform regularly and don't have access to all the possible equipment required
- Point raised that AFOI is a technique that most anaesthetists class as requiring 2 experienced anaesthetists. This is not always possible at Belmont
- Agreement that all airway equipment should be stocked and available regardless as there is a requirement for airway assistance in ED at Belmont
- Both cases performed uneventfully with Local and sedation

Plan

- Dr Kerridge to discuss further with Dr Sullivan