# "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

**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**

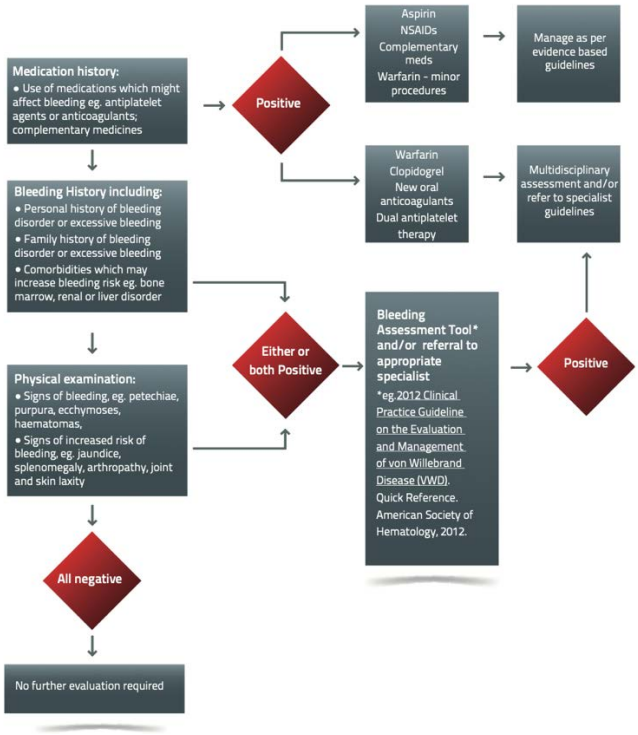
- Bleeding Disorder - Patient unsure of name of condition, knows it is a platelet problem.
- Normal FBC and Coagulation Screen
- VWD most likely diagnosis
- First diagnosed 30 years ago - presented with epistaxis
- PPH after all births
- Life-threatening intraoperative haemorrhage requiring massive transfusion 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