"From the Trough"

Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 3rd March 2016.
Publication date 9th March 2016.

Attendance: Paul Healey, T Martin, V Fraser, G Sullivan, D Edwards, S McGregor, S Eissa, L Kitto, R Kerridge

TOPIC 1 Post Op Cognitive Dysfunction

A message from a GP who runs a "chat list" for Hunter GP's was received inquiring about post-operative cognitive dysfunction. Apparently recent media reports have raised patient awareness of this, and patients are having second thoughts about having procedures such as colonoscopies because of fear that it will leave them with significant dementia. No one at the meeting was aware of these recent media reports. A brief summary statement outlining a "position" with regard to this vexed and controversial issue of current research had been provided to the GP list. It may well be that more and more patients are aware of this concern which is real although very "minor" in the overall scheme of risk.

TOPIC 2 Advanced Care Planning

The need for greater discussion of end of life decision making was raised. A variety of documents to provide to patients are available in the NSW Heath Resources. It was agreed that it would seem a reasonable thing to at least raise the issue as a matter of "routine" with any patient over the age of 70 having in-patient surgery, and provide them with some prompting material to take home and discuss with their family. Experience with getting elderly patients to engage with this issue has been mixed, with some patients remaining resolutely unrealistic.

TOPIC 3 The Importance of Patient Expectations

Experience with a endoscopy list was described where two patients of similarly significant comorbidities (in particular airways disease) had been listed for a gastroscopy. The first one understood that this would be a short uncomfortable procedure which had to be undertaken. He was managed with some local anaesthetic to the back of the throat and a small amount of midazolam. The gastroscopy was performed without any great problem, although the patient was uncomfortable. The next patient (almost the same medically) was expecting a GA for the same procedure and all sorts of difficulties ensued as a result. It reinforces the importance of shaping patient expectations in all areas of our practice.

TOPIC 4

A mid 70's patient with a mild developmental delay but semi-independent had been scheduled for a hip replacement. She had a previous hip replacement some years ago without difficulty, however had since had a problem with aspiration pneumonitis during sedation for a cataract operation two years ago. Since then she has developed significant respiratory disease with 6 MWT of 150 metres, impaired spirometry, and becomes short of breath with minimal exertion. She also becomes extremely teary and stressed when discussing the problems that occurred when she had the cataract under local. Complicating the issue was that a private anaesthetist had recently given an opinion that she was suitable for a general anaesthetic for hip replacement in a standard private hospital in Newcastle.
The anaesthetist who conducted the consultation was strongly of the opinion that this was a high risk procedure and should be thought about very carefully. At the very least respiratory consultation was required to see if there was any potential for optimising her care. He felt that she was physiologically unsuitable for a spinal, and medically unsuitable for a general anaesthetic. This could be "embarrassing" given the other anaesthetists opinion. What is the etiquette for dealing with this situation?
DISCUSSION: The case was discussed and it was felt firmly that in any consultation, the opinion must be that of the consultant alone. It is unfortunate if this may cause some differences of opinion with other consultants, however it is clearly your opinion that is being sort. In this case when the patient's brother (a retired Doctor) was contacted by phone, he appeared to be greatly relieved that a 'sensible' opinion was given that there should be major caution about proceeding with the operation at this stage.

"From the Trough"

Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 10th March 2016. Publication date 16th March 2016.

Attendance: Audience at Medical Grand Grounds

The PIG Meeting on the 10th of March was moved to Medical Grand Grounds where Ross Kerridge presented an overview of recent developments in Perioperative Medicine for the audience, most of whom were physicians or physician trainees. Key points were as follows:-

Organisational Changes as an International Trend

Recent organisational and system developments around the world in Perioperative Medicine may be considered to represent a "paradigm shift" in the organisation and delivery of procedural healthcare. It is somewhat similar to the early industrial revolution, where there was a shift from cottage industry to the industrial process line. This implies a shift to a "team" approach to the care process. In the UK the Royal College of Anaesthetists have launched the 'Perioperative Medicine Initiative'; In Europe the 'Enhanced Recovery After Surgery' movement includes similar ideas; In the USA the 'umbrella' term has become the 'Perioperative Surgical Home'. Regardless of name, the benefits are clear. A recent report from Vanderbilt UH in Tennessee shows significant improvements in the setting of an existing high-performing service and hospital.[1]

Preoperative cardiac assessment

Traditionally the emphasis has been ischaemic heart disease. However there is some evidence that classical models of preoperative inducible ischemia predicting outcome may not be valid in the perioperative setting. Perioperative myocardial infarction may not be clearly related to preoperatively defined ischemia areas in the coronary circulation. Acute inflammation may have been under-recognised in the pathogenesis of perioperative cardiac events. Cardiac functional reserve (exercise capacity) may also be a significant predictor of perioperative outcome in preoperative inducible ischemia. This has led to a focus on objective assessment of cardiac reserve by testing such as cardiopulmonary exercise testing as a potential strategy for preoperative assessment in marginal patients. The METS (Measurement of Exercise Tolerance for Surgery) trial is specifically looking at the role of CPET in preoperative assessment. The trial has recently completed collecting data, including from John Hunter. Publication would be expected towards the end of this year.

Preoperative cardiac assessment may identify a number of cardiology management conundrums that require input from a cardiologist or at least require close discussion with a cardiologist. At John Hunter, the weekly perioperative cardiology meeting on Thursday morning has provided an excellent means to discuss these cases.

Management of perioperative antiplatelet agents, and coronary artery stents in particular, is a common dilemma. This cannot be based on a simple formula, but requires clarification of the issues for each patient. This includes the indication for the antiplatelet agent, the surgical risk associated with the antiplatelet agent therapy, the stent characteristics (type, size, number, placement anatomy and time since placed), and consideration of what can be done postoperatively (ie in a major centre with 24 hour access to a cardiac cath lab versus a more remote site. This discussion can be used to decide when to stop the antiplatelet agent, and perioperative management strategy. In most patients, this will end up in a plan of ceasing clopidogrel some days before surgery. An alternate strategy would be to substitute with ticagrelor, which could be ceased 36 hours preoperatively, but this has not become popular. It is unusual to go to the step of intravenous tirofiban, which could be regarded as the highest level intervention of antiplatelet therapy. There is no rationale to bridging with anticoagulants

The POISE 2 trial in non-cardiac surgical patients and the ATACAS trials have provided some further information regarding the question of stopping or continuing aspirin in the perioperative period. POISE2 suggests that perioperative aspirin administration has no effect on death of infarcts but increases the risk of

major bleeding[2]. ATACAS suggests that aspirin therapy can be safely continued before cardiac surgery[3]. Unfortunately, both trials have significant flaw in design, and there remain areas of confusion.

The POISE trial clarified the management of beta blockers perioperatively. Patients on chronic beta blockers should have these continued, however it is generally inappropriate to start beta blockers on patients perioperatively. An excellent discussion of learning from past mistakes in use of clinical practise guidelines such as the case of beta-blockers was published recently[4].

The VISION trial in 2014 identified that myocardial injury after non-cardiac surgery (MINS) was common, and suggested that post-operative troponins should be measured routinely after major surgery[5]. Although post-operative troponins rise is associated with post-operative mortality and morbidity, it is not clear that measuring troponin will make a significant difference to therapy. There have been concerns that hospital staff may not respond appropriately to a troponin finding. Further, "treatment" may not make a clinical meaningful difference. This remains an area of controversy. Outside of the perioperative setting, 'resting' raised troponin is a predictor of long-term cardiovascular outcome[6].

Recent changes in non-cardiac management

A recent guideline from an authoritative British group discussing the perioperative management of patients with diabetes suggests:- Continuation of metformin in the perioperative period is appropriate for most patients; HBA1C should be measured "more aggressively" than has been in the past; It is appropriate to continue most oral diabetic medications other than those that actually lower blood sugar[7]. These new guidelines are being formulated for implementation at John Hunter.

A recent editorial and guideline from Britain suggests that a concern about "new" raised blood pressure measurements on the day of surgery may be inappropriate[8]. It is more appropriate to be concerned about documented primary care blood pressure. If recent primary care BP was acceptable, 'white coat' hypertension can generally be ignored.

The appropriate response to obstructive sleep apnoea remains an area on controversy. Investigating all patients on the basis of STOPBANG or similar indices is inappropriate. For pragmatic purposes, it would generally be appropriate to proceed with expectant management and ad hoc intervention for most patients other than those who present with clinically obvious obstructed sleep apnoea including daytime somnolence.

The BRIDGE trial recently looked at the appropriate role for perioperative bridging anticoagulation in patients with atrial fibrillation[9]. It concluded that for most patients it is unnecessary to bridge with LMWH. The risk associated with stopping Warfarin (and presumably other anticoagulants) prior to surgery has probably been generally overestimated in the past.

Perioperative cognitive dysfunctional is an area of active scientific debate and research. It is clear that there are detectable (minor and generally transient) changes in cognitive function postoperatively, however exactly how this is related to anaesthesia is not clear. It can also be seen after non-operative hospitalisation. An inflammatory aetiology has been suggested.[10]

There is current interest in liberalizing oral fluid administration and avoiding starvation by carbohydrate loading prior to surgery. The anaesthetists in Armidale, NSW, have recently instituted a program for carbohydrate& fluid loading for their patients, which has been greatly appreciated by patients.[11]

Recent advances in the recognition of high prevalence of iron deficiency in the community, improved understanding of iron metabolism, including the link between information and iron absorption, and the availability of new parenteral formulations, have increased the use of intravenous iron prior to surgery.

Pre admission smoking cessation is valuable at any time, despite a persistent but widespread myth about the dangers of short term preoperative smoking cessation.

Obesity is a major complicating factor for anaesthesia. It is clearly an epidemic of the 21st Century. Australia has lead the world in the fight against tobacco, and smoking rates in Australia are now amongst the lowest in the world. Perhaps the same strategies (including preoperative interventions) can be applied to the obesity epidemic.

Debate about appropriate intravenous fluids continues[12]. A recent review in the NEJM makes useful recommendations regarding hypotonic fluid in children but recommends surprisingly high volumes of fluids (as normal saline!) for adults[13].

Post-operative complications.

The REASON trial[14] and EUSOS Study[15] both identified surprisingly high mortality in surgical patients. Lack of critical care resources and failures in post-operative care were considered a major contributor to this avoidable mortality and morbidity. The ISOS Study (International Surgical Outcome Study), being led by Rupert Pearce of London, (who also lead the EUSOS Study) has concluded after gathering data from 27 countries (including from John Hunter Hospital) The initial results were announced (to the trial participants) by webcast in February 2016. The conclusions support earlier findings of surgical complications as frequent cause of death and interestingly suggest that excellent ward care postoperatively may reduce the requirement for critical care beds, but both are a major determent of patient outcome.

When postoperative complications develop, "failure to rescue" has been identified as an important determinant of mortality with after major inpatient surgery. (A recent analysis of NSW Health data based on local government areas suggested that there is geographic variation of failure to rescue in public hospitals in NSW, with a "hot spot" centred on the Newcastle area[16].

Early preoperative assessment will necessarily include consideration of "high stakes assessment".
This is particularly to avoid death without dignity. Particularly for the "old old" quality of life and quality of death may be more relevant than mortality or length of acute hospitalization. More information about what matters to patients needs to be considered in making these decisions. Sometimes the way we say things matters; in particular we should never talk about surgery (nor anything else) as life- saving. At best we only delay death or improve the quality of the dying process.

In consideration of surgery in the elderly, frailty is being increasingly recognised as an important risk factor for the development of post-operative complications and an increase length of stay. More work is required on the recognition of frailty in the elderly and methods that may be used before the operation to modify the condition and improve outcome[17].

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Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 17th March 2016. Publication date 24th March 2016.

Attendance: Bernie Frost , Monique McLeod, Todd Eggleton, Ross Kerridge, Caitlyn Weston (SRMO), Gabrielle Papeix, Louise Hails, Lisa Clark, Sarah Armarego, Paul Healey,

TOPIC 1: *Neuromyelitis Optica*

A 41 year old female in the 3rd trimester presented for assessment prior to planned delivery (G2P1). Planning for a vaginal delivery, she is currently in reasonable health but has a history of neuromyelitis optica. This condition is somewhat similar although pathologically distinct from multiple sclerosis – inflammation and demyelination involving the optic nerve(s) and spinal cord. The patient has had one pulse dose of prednisone during the pregnancy and is scheduled for a rituximab infusion post-delivery. She also has a history of post trauma spinal surgery (lumbar fusion and C5-7 fusion).
Discussion: What are the anaesthetic implications? This had been discussed from clinic with a neurologist and by standard reference texts. Management is similar to multiple sclerosis:- There is no evidence that anaesthesia (general nor regional) is associated with adverse outcome however careful discussion with the patient and documentation of the current state of the disease is recommended. Given the past history of spinal surgery (L5-S1) an early epidural is recommended or CSC for caesarean section.

TOPIC 2: *L4-5 Decompression*

An 83 year old lady with moderate aortic stenosis, carotid disease and a history of recent syncope was booked for L4-5 decompression. She had been discussed with the cardiologist in advance. Aspirin had been continued with the neurosurgeons agreement. She was noted preoperatively to have 1st degree heart block and slightly prolonged QT. One hour into the case she developed complete heart block, but maintained blood pressure and perfusion. This reverted with atropine.
Discussion: Should she have been treated differently? - Should she have been treated with prophylactic magnesium? (Since this is the treatment for prolonged QT syndrome if it evolves into a dysrhythmia). There was disagreement, with the majority feeling that it is more appropriate to just treat expectantly. Does the heart block explain the preoperative syncopal episode? : Interesting question but the preoperatively Holter monitor had been normal.

TOPIC 3: *Ischemic Heart Disease*

An 85 year old frail lady booked for an L3-4 fusion. Past history of asthma not requiring hospital admission, otherwise generally OK. Ischaemic heart disease with two coronary artery stents inserted in 2010 and ongoing dual antiplatelet therapy. The neuro surgical registrar said that both aspirin and clopidogrel should be ceased in this and in all patients. Is this appropriate?
Discussion: Most (but not all) Neurosurgeons will accept doing spinal surgery on aspirin if there is a "good reason" for this to continue. In this case the surgeon would be happy to continue aspirin. If in doubt it was suggested to speak to the consultant rather than the registrar to clarify this.

TOPIC 4: *Laparoscopic adrenalectomy for metastatic prostate cancer*

Patient is otherwise reasonably well. Does this patient need special preparation/monitoring because of adrenal manipulation.
Discussion: No. There may be blood pressure effects from surgical pain and manipulation of the kidney & adrenal, however this can be managed just by conventional anaesthesia management. It need not be managed like a pheochromocytoma.

TOPIC 5: *Colonoscopy for occult blood loss*

A 65 year old patient was booked for a colonoscopy for occult blood loss and slightly raised CEA. He was a heavy smoker, FEV1 of 0.72 L/min. Previous history that "he almost died" having a hernia repair at Belmont Hospital in 2013. Has a current chest infection and normally has very low exercise tolerance. How should he be managed?

Discussion: The main question was whether he was appropriate at all. He was unfit for major surgery regardless of pathological findings. A colonic stent maybe appropriate but he currently has no symptoms suggesting a colonic obstruction. If a colonic stent insertion was being considered or was likely, it would be appropriate to ensure this was included in the consent for the procedure. Insertion of a stent may require deeper anaesthesia and different positioning. It was suggested to return the patient to the proceduralist for reconsideration of whether the procedure was indicated.

TOPIC 6: *Differing Echo Reports*

A patient with a subtle history of cardiac disease and booked for a nephrectomy had a preoperative echocardiogram. This was reported (in the absence of consultation) as showing severe aortic stenosis with an aortic valve area of 0.85 cm^2. This was inconsistent with clinical findings. After discussion at the perioperative cardiology meeting, a cardiologist review was organised. It was noted that the patient had a good exercise tolerance, no cardiac symptoms, and no signs of LVH on ECG. Repeat echo gave an estimated valve area of 1.5 cm^2. The case proceeded with relatively normal management without incident.

Discussion: This story illustrates that there is considerable subjectivity and variability in the interpretation and reporting of echocardiograms. They should always be considered together with the clinical findings.

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Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 24th March 2016. Publication date 31st March 2016.

Attendance: Sabry Eissa, Keith Streatfield, Bernie Frost, Paul Healey, Ross Kerridge, Pedro Diaz, Fiona Merritt

TOPIC 1: An *Unfortunate Cancellation?*

A 55yo patient booked for septoplasty as treatment for obstructed nose. Has impaired breathing, particularly with exercise, that he strongly attributes to his blocked nose. Past history of three ACS in 2006-08 with insertion of two stents, and a NSTEMI 15 months ago. Patient non-compliant with cardiology follow-up (inc. angio) at that time, and reports that he cannot afford cardiology follow-up. Is on co-plavix, but had stopped the clopidogrel for four weeks prior to date of surgery, and changed to aspirin (possibly on surgical advice). Smokes 10/day. Seen in clinic one week preop. Told that he was at significant cardiac risk (independent of surgery), but was insistent that he could not pursue cardiology investigation in his area, and his blocked nose was the major problem he had. He accepted the risks. Clinic anaesthetist felt he could not realistically be improved (given his obsessive focus on blocked nose), the surgery was relatively low-risk, and the 'slot' for surgery had become unexpectedly available, so accepted for surgery. Advised to stop smoking for surgery.

On day of surgery he was cancelled as the procedural anaesthetist felt he needed cardiology consult. Surgery should be postponed until this, in view of his general non-compliance. Since pre-op clinic visit he had seen GP and was booked to see a cardiologist (one week after planned surgery). He also reported that he had increased his smoking as he resented being told to reduce.

Discussion:- What could have been done? 1. Surgeon's comments on RFA could have triggered earlier clinic assessment; 2 Could have been discussed at periop cardiology meeting to fast-track a cardiology review and/or clarify need for angiography; 3 Procedural anaesthetist could have been warned, and reason for accepting by clinic better documented/discussed; 4. The Procedural Anaesthetist could have identified a problem when reviewing patient on CAP early, rather than on the day; 5 Arguably, he should have been reconsidered for surgery in view of non-compliance, but there is no clear LHD policy or process on this issue, so responsibility and position of medical staff is unclear.

TOPIC 2: *Hypertension and perioperative antihypertensives*

Recent guidelines from the UK suggest that primary care hypertension is more relevant than BP in preop clinic or on day of surgery. BP immediately preoperatively may be alarmingly raised in some patients but it is not clear how this should be managed if primary care BP is acceptable. The phenomenon has been labelled 'green scrubs hypertension' in the USA. It was generally agreed that if the BP was raised or in the upper normal range in the clinic setting ACEIs and ARBs should be continued on day of surgery for minor/moderate surgery, but should be withheld for major surgery.

TOPIC 3: *Regional vs General for emotional reasons*

Patient 46yo with demyelinating muscular dystrophy mainly affecting lower limbs, wheelchair-bound, BMI 28, profoundly deaf (communicates by signing), for change of Mirena and Pap smear under GA. Strongly refuses intervention without a GA. Previous Asthma admission in 2013; currently FEV1 0.63, FVC 1.34; widespread audible wheezes. BP 230/129, untreated:- no recent primary care. Postponed. Referred to Respiratory Rapid Access clinic and to GP.

Discussion:- Should she be offered a GA (after medical optimisation)? A spinal 'should be' acceptable, despite demyelinating syndrome, but remains a concern to many. Local anaesthesia is acceptable for this procedure for some women. Emotional issues should be addressed directly. Others felt that a GA for such a short procedure is acceptable, the risks must be balanced against emotional acceptability…..

TOPIC 4: *'Reno-protective Anaesthesia'*

A patient with pre-existing renal impairment of unknown cause (eGFR 23) for major abdominal surgery. The renal physician has enquired can we give a reno-protective anaesthetic. What can be done?

Discussion:- Most research on protection from kidney injury has focussed on radiocontrast media, which is of limited applicability to other injuries. (Prophylactic NAC is supported by limited evidence before exposure to radiocontrast, but not elsewhere.) A recent Cochrane review of interventions to protect the kidney could not find reliable evidence to support any particular intervention. At this time, appropriate practice is to minimise injury by nephrotoxins; minimise inflammation; maintain renal perfusion and intravascular volume. No pharmacological therapy is clearly supported by evidence. Mannitol has Grade C 'maybe of benefit' at best. Frusemide 'may be harmful' (Grade B). Grade A evidence that dopamine is of no benefit. (See Up-to-Date or Fleisher's Evidence-based Practice of Anaesthesiology.) More speculative ideas were suggested including:- Regional anaesthesia may minimise sympathetic responses including vasoconstriction; Avoid raised intra-abdominal pressure intra and postoperatively; Dexmetetomidine may have advantages as an alpha-blocker; A recent paper compared renal effects of Hartmann's and Normal Saline, supporting the former for preoperative hydration[1].

TOPIC 5: *Back Surgery Postponed*

A patient with an obvious goitre, awaiting ENT clinic appointment, was accepted through clinic for elective back surgery. She was then postponed on Day of Surgery when she reported dysphagia, difficulty breathing and feeling frightened when lying flat. The clinic Doctor did not get this history. Language/cultural issues, and patient's own poor understanding of her history may have been contributing factors. She was admitted 'overnight' to enable early CT of neck (OPD waiting time is weeks). CT showed goitre but no retrosternal extension. Due to confusion about planned management, she then stayed in hospital for the whole weekend, at which time ENT reported that 'she was acceptable for anaesthesia'. (Later discussion between senior consultants led to expedited ENT clinic review and surgery for goitre being brought forward to precede back surgery.)

Discussion:- Clinic history taking is important! Communication in a referral or request to another service requires clarity about what issues are to be considered and why. Anaesthetists may need to be particularly careful in this regard, as their requirements/concerns may not be familiar to other Doctors.

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"From the Trough"
Perioperative Interest Group Notes

Based on Cases discussed at the Weekly PIG Clinical Meeting on 31st March 2016. Publication date 7th April 2016.

Attendees: Libby Freihaut, Lisa Doyle, Paul Healey, Daniel Orr, Claire Wohlfahrt, Georgie Mahony, Michael Hicks, Alison Clark, Candice Peters, Julie-anne Avard

(Thankyou Candice and Paul for extensive notes!)

TOPIC 1: *Too sick for Cataract Surgery?*

78 year old male booked for cataract extraction and IOL insertion. Patient reports 90% vision loss in one eye and 50% in the other eye. He is unable to read, watch TV or mobilise outside for fear of falling. Thus vision loss significantly impacting on quality of life.

PMHx: Severe COPD (FEV1 reported to be 0.9L but in clinic 0.63). CCF likely due to severe Aortic Stenosis deemed as inoperable by Cardiologist Dr Collins. (Last echocardiogram in 2014 – normal LV systolic function, mean AV pressure gradient 40mmhg). His current exercise tolerance is approximately 20m on the flat with a 4 wheeled walker. On exertion he is required to sit for 5 mins to regain his breath before walking again.

He lives at home with his wife who reports that he does little but sits in his recliner chair and listens to the radio all day. Orthopnea requires sleeping in a "Smokey Dawson" recliner chair. He has had two recent admissions to JHH emergency for pulmonary edema. Also have T2DM, PVD, CKD, and Obesity BMI32. His examination revealed widespread expiratory wheeze and fine bibasal crackles. His respiratory rate was elevated at rest (24 bpm) and his resting SaO2 was 92% on room air.

Discussion:-

- Is this patient suitable for surgery? What is his life expectancy?
- Is this patient suitable for eye block and sedation for this procedure given his orthopnoea and requirement to sleep in recliner chair? This would be ideal if the patient could tolerate it with limited sedation. Could the optiflow be used to help him tolerate the position (oxygen and PEEP)?
- Should he just be done under a general anaesthetic to allow optimum positioning?
- It was suggested that his case be discussed with the Opthalmologist to determine just how supine the patient is required to be for the procedure.

Outcome:-

- He was discussed with Opthalmologist – who said he is happy for bed to be inclined up for procedure as long as head is level. Therefore the procedure should be conducted under local anaesthesia if patient has neck ROM. However, if this is not possible he may not be fit for OT.
- He was discussed with cardiologist. He suggested increasing his diuretic medications pre-operatively. He will be reviewed post operatively as planned, as he is not a surgical candidate.
- Given current quality of life it was felt that we should proceed with surgery.

TOPIC 2: *Interval Lap Cholecystectomy?*

91y/o lady for Lap. Chole due to possible Biliary Colic 6-9 month history of becoming increasingly unwell w back pain, loss of weight (15kg since Aug 2015), nausea, dyspepsia & vague abdominal pain. No investigations on CAP as patient's daughter works for a GP who arranged private referral to surgeon. Investigation by CT is suggestive of possible pancreatic mass. DVT/PE due to Prothrombin gene mutation,

Discussion: Concerns re: advanced age for GA with atypical presentation of biliary colic. Discuss with surgeon re rationale for this surgery & possibly contacting GP regarding concerns.

TOPIC 3: *Spinal Cord Stimulator*

35 year old female referred to the Perioperative clinic for review for complex obstetric history. 36/40 weeks pregnant. G2 P1 – normal pregnancy, no blood pressure or diabetes. Previous SVD in 2009 – nil anaesthetic intervention. Usually fit and well. No regular medications.

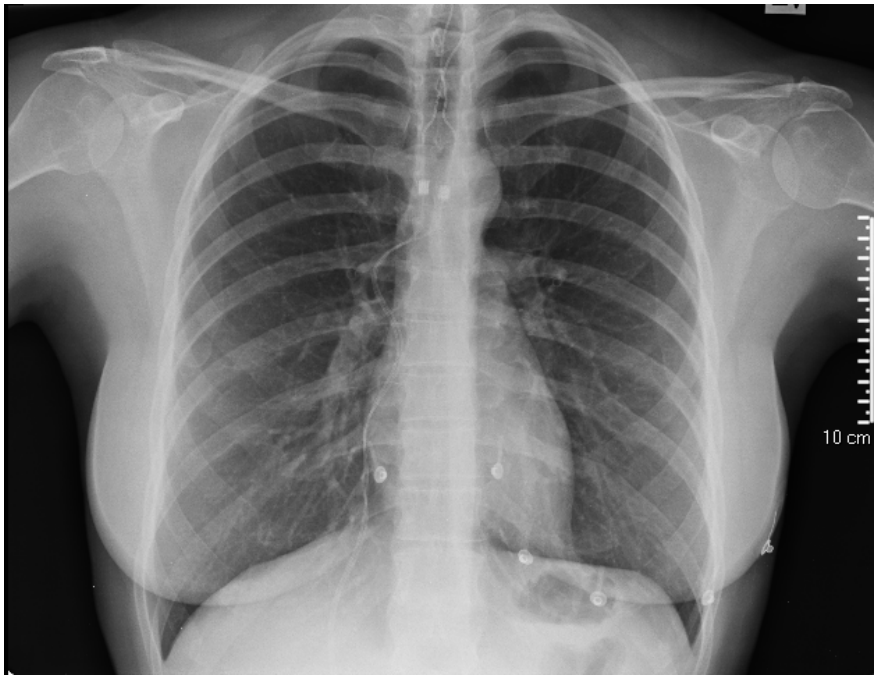
However… Was involved in a MVA in 2008, with left shoulder injury only. She had Acromioplasty surgery for ongoing pain, which unfortunately progressed to chronic regional pain syndrome of the left shoulder and arm. She has been managed in a private chronic pain clinic. This has involved trials of multiple medications, all of which she reported side effects for prolonged dosing (but not allergies).

She eventually had a spinal cord stimulator placed a number of years ago and her pain has been very well controlled. She sought advice about analgesia for labour and options should she require a caesarean section.

The stimulator electrodes enter the spinal canal at T1/2 and end at C2. The leads are then tunnelled laterally around the posterior chest and abdomen until they reach the generator box, which is positioned adjacent to the umbilicus on the abdomen. They are able to be seen on CXR on PACs (see below). The generator has been switched off during the pregnancy as the patient had been concerned as there was no evidence of safety of its use during pregnancy. Her pain has been controlled in this time not requiring any additional analgesic agents. She will see private Pain specialist after her delivery for further management of device.

Her management should be as normal for labour and caesarean with the following precautions:

- Possible risk of lead infection – use prophylactic antibiotics for caesarean delivery (no real change to practice).
- For caesarean delivery place diathermy pad on the opposite side of body to generator box to reduce risk of interaction. Ideally use bipolar diathermy to reduce risk of damage to the generator box – however unipolar acceptable if required as there is no risk to the patient with the box switched off. There is a small risk of electrical damage to the generator box, which can be checked post operatively.



TOPIC 4: *58y/o gentleman for cataract surgery*

PMHx: Cognitive impairment? related to EtOH use. Have careers though Leapfrog Ability & Meals on Wheels. Severe COPD: FEV1 0.8, ratio 30% predicted. Wheeze audible at bedside, still smoking in spite of patches & careers removing cigarettes (patient collects discarded butts & rolls own with collected tobacco). Deferred/cancelled on 3 previous occasions (respiratory illness, not fasted in bay, did not want surgery when risk/benefits discussed in clinic).

Ophthalmologist contacted by clinic doctor but message relayed by his secretary that he is very familiar with the patient, surgery needs to be done & patient will need a GA due to respiratory issues. Patient himself does not feel poor vision impacts on his ADL's in any way (reads with glasses). Patient also c/o dysphagia with GP investigations revealing possible oesophageal neoplasm on Barium Swallow.

Discussion: Concerns regarding Guardianship raised, suggestions to get GP involved & defer eye surgery in favor of gastroscopy to investigate GI mass. Also may need to admit patient day before to prevent cancellation on day.

Action: Contacted GP who will look into Guardianship issues with patient & careers. The , usual procedural anaesthetist for ophthalmologist was involved & kindly arranged expediting Gastroscopy & deferring cataract until a month later.

TOPIC 5: *Obesity and Carpal Tunnel Surgery*

Female patient with Morbid Obesity: BMI 55, COPD & OHS (obesity hypoventilation syndrome). Unable to lie flat due to combination of back pain & SOB thus sleeps sitting up, but partly on her side. Occasionally drops objects & gets intermittent nocturnal paraesthesia BUT minimal symptoms plus uncertain re trial of conservative Rx such as splints. It was felt that brachial plexus blocks would be risky due to her respiratory condition & an axillary block would be challenging due to body habitus.

Discussion: Agreed that discussion with patient & surgeons should emphasizing this patient is appropriate for local infiltration only. Would plan to sit patient as upright as possible on theatre table, explain tourniquet discomfort & if she was unable to accept or tolerate this, then surgery should be cancelled.