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1

QIP of referral Booklet

Ahmed Hassan Mattar
princess royal university Hospital, orpington, United Kingdom

Abstract

Background/Introduction

Referring a patient is an important daily task of an orthopaedic doctor.
Sometimes, During a busy day
we have to do more than one referral
different specialities
different hospitals
If we incorrectly complete the referral of the patient we face the following:
Delay in the care for the patient
Wasting time to figure out how we can refer the patient
Increase the work load
Slowing the flow of work – Inefficient

Aims/Objectives

Aiming to Test:

How do they currently find how to refer a patient?
Are they up to date with the new referral pathways to common specialities
How do they currently find how to refer a patient?
Do they think a referral booklet would be useful ?
How they want the booklet to be available to be used and structured

Patients and Methods

We used a Questionnaire sheet and circulated to all SHOs and Reg Colleagues .

Participants: 16
10 questions

Results

80 % gave wrong answer for making gastro & JRU referrals
70 % gave wrong answer for making Respiratory referral
75% find difficulty in making referrals
56.2% find difficulty as they don't know how to make a referral
31% find difficulty due to Shortage of contact details of the recipient team
93% think having a referral booklet will be useful.
56.2 % want the booklet as written instructions

Discussion/Conclusion

Based on the questionnaire results we have created and new reference booklet on how to make common referrals

Benefits
No delays in patient care
Take the stress out of contacting various people on how to make the referral correctly
Improve the efficiency of the overall process
The booklet is concise and easily accessible
Recommendations:
Circulate the booklet to all the SHO / Regs
Keeping the booklet up to date + adding the speciality based on the frequency of referring to speciality

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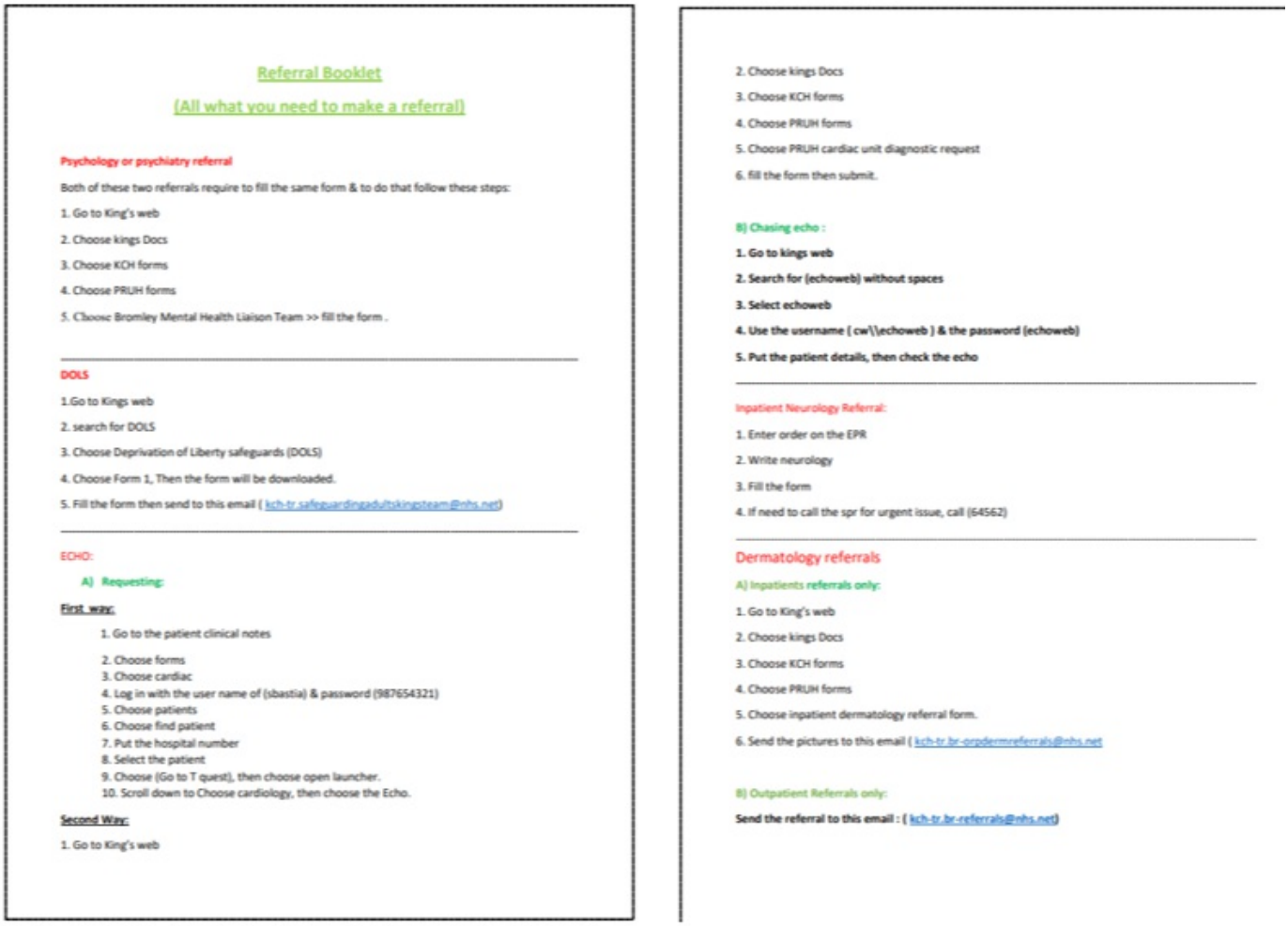
Booklet layout



Referral Booklet

(All what you need to make a referral)

Psychology or psychiatry referral

Both of these two referrals require to fill the same form & to do that follow these steps:

1. Go to King's web
2. Choose kings Docs
3. Choose KCH forms
4. Choose PRUH forms
5. Choose Bromley Mental Health Liaison Team >> fill the form .

DOLS

1.Go to Kings web

2. search for DOLS

3. Choose Deprivation of Liberty safeguards (DOLS)

4. Choose Form 1, Then the form will be downloaded.

5. Fill the form then send to this email (kch-tr.safeguardingadultskingsteam@nhs.net)

ECHO:

A) Requesting:

First way:

1. Go to the patient clinical notes
2. Choose forms
3. Choose cardiac
4. Log in with the user name of (sbastia) & password (987654321)
5. Choose patients
6. Choose find patient
7. Put the hospital number
8. Select the patient
9. Choose (Go to T quest), then choose open launcher.
10. Scroll down to Choose cardiology, then choose the Echo.

Second Way:

1. Go to King's web
2. Choose kings Docs
3. Choose KCH forms
4. Choose PRUH forms
5. Choose PRUH cardiac unit diagnostic request
6. fill the form then submit.

B) Chasing echo :

1. Go to kings web

2. Search for (echoweb) without spaces

3. Select echoweb

4. Use the username (cw\\echoweb) & the password (echoweb)

5. Put the patient details, then check the echo

Inpatient Neurology Referral:

1. Enter order on the EPR
2. Write neurology
3. Fill the form
4. If need to call the spr for urgent issue, call (64562)

Dermatology referrals

A) Inpatients referrals only:

1. Go to King's web
2. Choose kings Docs
3. Choose KCH forms
4. Choose PRUH forms
5. Choose inpatient dermatology referral form.
6. Send the pictures to this email (kch-tr.br-orpdermreferrals@nhs.net

B) Outpatient Referrals only:

Send the referral to this email : (kch-tr.br-referrals@nhs.net)

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Poster keywords

Referral, Booklet, Ward, specialities

2

QIP of Training assessment for Orthopaedic Junior doctors

Ahmed Hassan Mattar, Paulius Birgeris, Osman Khan
princess royal university hospital, orpington, United Kingdom

Abstract

Background/Introduction

Many Consultants are not happy with the Training SHOs performance either in the Clinic or theatre.

There were some complaints about the Junior doctors' performance in their training day.

Some SHOs what they should do in the training day either in the clinic or theatre and feel they need more support from the senior level.

Aims/Objectives

Aim:
To Know the good and weak points that the SHOs are doing to keep them and encourage more.

Circulating a survey to the Spr & consultants to collect responses about their opinion of the service delivered by the juniors in the clinic or theatre days.
Circulating a survey to the SHOs to know which areas need more support.

Patients and Methods

Method: by circulating two surveys :

First survey: to the consultants & registrars regarding their feedback about the training sessions, expectations and how to support the juniors more.

Second survey: to the SHOs to collect feedback about their performance, their weak points, strength points and how to gain more support.

Creating an assessment form having all of the needed jobs from the SHOs in the clinic or theatre , which need to be filled by each SHO in his training day & to be signed off by a senior.

Inclusion criteria: orthopaedic team in PRUH.

Results

70% of seniors are not satisfied with junior's performance in clinic.
50% not satisfied in theatre
70% see the need for juniors to see patients in clinic and see patients with the senior after surgery.
40% of juniors dissatisfied with theatre training
100% of juniors think need more theatre involvement

Discussion/Conclusion

The Junior doctors need to make more efforts in the training shifts especially in the clinic.

The junior doctors need more support in terms of teaching from seniors, more involvement in the training day either theatre or clinic.

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Training Assessment Form

This assessment form is not for any judgement. It's just for improving the qualit
training given to the SHOs.

This form will help us to know the defects and the challenges that the junior do
facing during their training shifts either in the theatre or the clinic.

Please fill this form in the way you feel you are fulfilling these tasks to help us k
which part needs improvement for the sake of supporting the SHOs and ensurir
the maximum experience during their shifts

Trauma Meeting

- [ ] Present at 8 am with the consultant& Spr doing the trauma list
- [ ] reviewing the cases, X rays & management plan
- [ ] checking if the image identifier requested, blood results, 2 G&S, CXR, ECG, swab, Cross match(if required)

Theatre Briefing

- [ ] Join the briefing led by the consultant
- [ ] Aware of what equipment will be required
- [ ] Aware if antibiotics, tranexamic acid will be needed
- [ ] Aware of positioning, tourniquet, supports, table(traction/ simple), cast or

- [ ] Aware of positioning , tourniquet, supports, table(traction/ simple) , cast or

Anaesthetic room

- [ ] joining the the sign in - in the anaesthetic room
- [ ] checking the consent form & mark
- [ ] Checking the need of the antibiotics / TXA
- [ ] Aware of estimated blood loss, image intensifier (is radiologist in theatre?)

https://docs.google.com/forms/d/e/1FAIpQLSdBOr4J41nUAAJLEYvZYY4PuGfdrEV00BLe9TT7DdRX2eSQxQ/viewform

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/22/2021 Training Assessment Form

Preparation inside theatre

- [ ] reviewing the surgical approach
- [ ] joining the patient transfer from the Trolley into the operating table
- [ ] application of supports & tourniquet

Scrubbing

- [ ] Know how to put the gown on
- [ ] Aware of the gloves wearing aseptic technique

Preparing the patient

- [ ] joining the Chlorhexidine +- Betadine preparation
- [ ] joining the draping with sterile drapes

Surgery

- [ ] knows how to follow the approach & technique
- [ ] involved in haemostasis, suction
- [ ] Aware of which sutures (clips) are going to be used for different layers
- [ ] involved in dressing, bandage, TEDS ,cast application & patient transfer to tr

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Poster keywords

Training, orthopaedic, Theatre, clinic, surgery

3

Audit of Resuscitation Status Decision in orthopaedic wards

Ahmed Hassan Mattar, karim El fergani, Benjamine Lau, Sandeep Kohli
princess Royal University Hospital, orpington, United Kingdom

Abstract

Background/Introduction

Sometimes, the SHOs find some difficulties to do the resuscitation status for each patient, Sometimes because they don’t know the patient’s medical history which is not in the records.

sometimes don’t know which level should be the DNAR status and according to which conditions should the patient have this level.

Aims/Objectives

Aim:
To ensure that Every Orthopaedic SHO knows in which circumstances, the patient is not fit for the CPR & when should choose each level of the DNAR status.
To enable the Junior doctors to decide under senior supervision the resuscitation status and the following subsequence for their decision in the treatment plan.

Objectives:
Collect data about the resuscitation status for each patient.
Arrange for a teaching session from the medical team to

Patients and Methods

Sample size: 100 patients
Audit period: May, June 2021
Source of data: from the EPR.
Who is Collecting data: the SHO.

Inclusion Criteria:
Any patient admitted in PRUH initially under Orthopaedic team & resuscitation status was clerked by orthopaedic team. (admission clerking should be done by orthopaedic team)
Any patient has resuscitation status clerked by a different team, but admission clerking was done by orthopaedic team.
The patient is considered to have Resus status on admission if recorded on the day of addmission or the following day, otherwise won't be on addmission

Exclusion criteria:
Any orthopaedic patient admitted initially under different team then transferred to Orthopaedic .
Children (less than 18 years old)

Results

78 patients had their resus status recorded
22 do not have resus status record
Only 67 from the 78 done by orthopaedic team & 11 by orthogeriatric team .
45 done on admission & 13 done lately.

Discussion/Conclusion

It is important to note that Trust Policy states that every DNACPR decision must be discussed with a registrar level or above..

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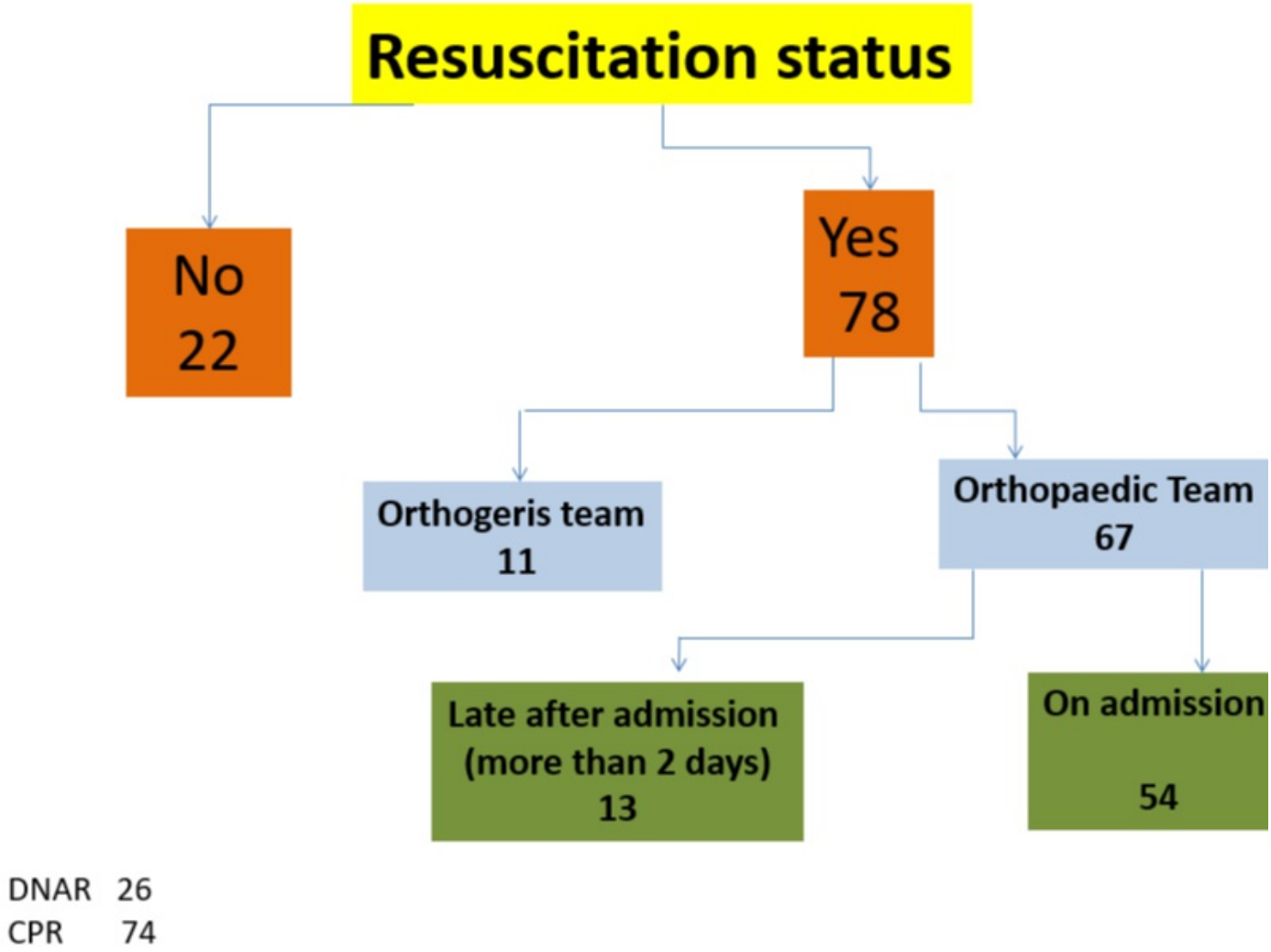

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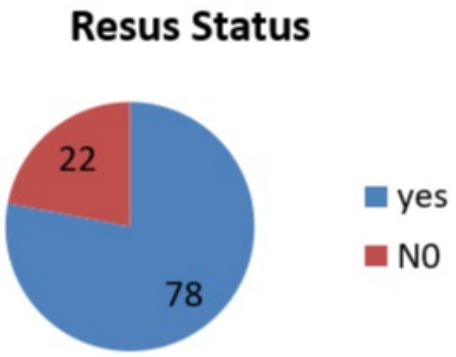

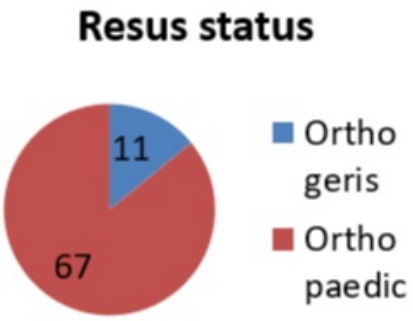

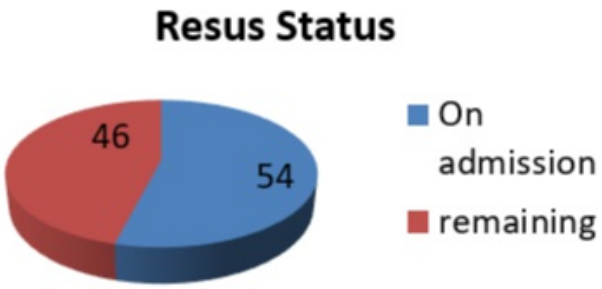

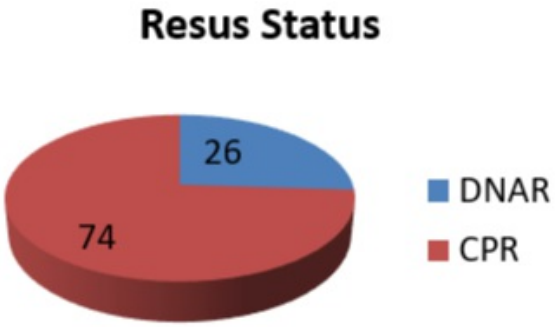

Program permission

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Poster keywords

Resuscitation, Orthopaedic, resus, eldery

4

Timing of the first dose of Enoxaparin after the admission of frailty femoral fractures Audit

Ahmed Hassan Mattar, paulius birgeris, Mark chatterton, Elleanor Tung
princess Royal University Hospital, orpington, United Kingdom

Abstract

Background:

We noticed with standard King's College NHS Foundation Trust administration of Enoxaparin timing 6 pm that some of the patients who are admitted at or shortly before 6 pm are not receiving 1st dose of Enoxaparin pre-operatively or until post-operatively.

(NICE guidelines)

•Consider pre-operative VTE prophylaxis for people with fragility fractures of the pelvis, hip or proximal femur if surgery is delayed beyond the day after admission. Give the last dose no less than 12 hours before surgery for LMWH

•Fragility fractures of the pelvis, hip and proximal femur patients should have extended DVT prophylaxis. It decreases the risk of VTE. It is medico-legal and it's patient care.

•Local Clinical Guidelines 'Risk Assessment and thromboprophylaxis guidance for prevention of Venous Thromboembolism (VTE)' 2018

•High risk of VTE with low risk of bleeding

Aim:

•Identify a number of patients who could have hopefully had Enoxaparin after diagnosis and still be eligible for surgery the next day.

•The first dose of Enoxaparin before 9 pm.

Methodology:

•Sample size: 59

•Inclusion criteria: Patients with frailty femoral fractures admitted to PRUH in the months of August and September 2020

•How was the sample identified: EPR documentation, PACS, Galaxy

•Audit period: August and September 2020

•Data collection type: retrospective.

•Date & time of diagnosis (pelvic XR/MRI/CT timing)

•Orthopaedic clerking date (EPR or handwriting date of other medication prescription)

•Date & time of first dose of Enoxaparin given, was it prescribed but not given (nurse crossed it off, marked not given, reason)

•Date & Time of commencement of surgery (time into anaesthetic room)

•Anticoagulation pre admission, VTE assessment on admission.

Results:

•Enoxaparin was not prescribed by 9pm pre-operatively on the day of admission for 12 out of 59 patients

•Even though for some patients Enoxaparin was prescribed until 9pm on the day of admission, only 36 out of 59 patients received the correct earliest possible doses of Enoxaparin when they could have had (due to prescribing issues, nursing administration issues, surgeon failure to prescribe, confusion over DOAC and Warfarin pre-admission usage)

• Nursing and often a doctor issue where nurses ask whether to omit a dose and doctor erroneously advises missing it

•7 out of 59 patients had Enoxaparin missed simply due to ignorance regarding "for surgery tomorrow“

•Each of these needs a Datix to highlight and change poor practice due to ignorance as ward managers (including medical wards) automatically get sent a copy.

•Post op administration of Enoxaparin is failing.

•20 out of 59 patients did not have a first dose of Enoxaparin until >24 hours post op.

•This is a failure of : 1) Operating surgeon and 2) Admitting doctor who both missed the opportunity.

• Important to note that only the operating surgeon could have done a correct post-op prescription for all patients (whether on warfarin or DOAC or not) AND can simultaneously correct the post op timing of prophylaxis. Admitting doctor is not able to predict what will be needed post op.

Recommendations:

Education needed

•Clerking doctors - attention to detail on prescribing timings

•A&E / ward nurses - pre-op heparins can be given up to 12 hours before surgery and so SHOULD be given up to 9pm the evening before hip fracture surgery.

•Surgeons - As per hip fracture operation note, it is the operating surgeon's responsibility to determine timing of post-op thromboprophylaxis .

Program permission

yes

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Poster keywords

enoxaparin , NOF fracture, dose, timing

5

Reducing unnecessary preoperative chest x-rays (CXR) for elective surgeries.

Sean Boyd, Shankar Lal, Christopher O'Loughlin, Elaine Doyle, Aine Cafferkey, Alan Broderick, Ciaran Johnston, Rory Naughton
St James's Hospital, Dublin, Ireland

Abstract

Introduction:

- The indications for preoperative CXR for elective surgery are outlined in our current hospital guideline (Table 1). We found very few staff were aware of these guidelines, and that this lead to unnecessary CXRs being performed.

- Apart from the financial burden, this can cause significant surgical delays and a higher burden on the patient, such as being exposed to unnecessary radiation.

Methods:

- We initially focussed our attention on the intern group, who order the CXRs. This was done predominantly through teaching sessions. Yet, due to three monthly rotations, amongst other factors, we found that this did not yield the intended results.

- We realised that there were more stakeholders involved than previously thought (Figure 1). We looked at the patient pathway, and discussed the issue with everyone involved. This included Radiography, Radiology, Nursing staff, Anaesthesiology and Surgery.

- We took into account each group’s concerns, and ensured that everyone was aware of the current hospital guidelines. We circulated these guidelines around all of the surgical wards and theatres. The CNMs of each ward kindly agreed to post a set of guidelines at the nursing stations, so it was clearly visible to nursing staff, interns and their surgical teams.

- After our intervention was put in place, we performed a retrospective chart review on all patients that underwent elective surgery for one week, and reviewed whether a CXR had been performed, and whether it was necessary or not, as per the guidelines.

Results:

- In one week, in which 90 elective cases were performed, we found that 38 patients had a

preoperative CXR. Of these, 8 were deemed unnecessary by the guidelines in place (21%). At a cost of €42 per CXR, the total cost for the week was €336, which can be extrapolated to €17,472 per annum.

Conclusion:

- We took a thorough and detailed approach in our attempts to solve this issue. We followed the patient pathway to theatre and discussed with all stakeholders, in order to understand the process in which preoperative CXRs are ordered. In doing this, we were able to identify the flaws in the current system, and carry out our intervention, which will hopefully lead to a significant reduction in preoperative CXRs ordered in the future.

Reference:

- Routine Preoperative Tests for Elective Surgery. https://www.nice.org.uk/guidance/ng45. Published 05 April 2016.

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Table 1:

Indications for Pre-operative CXRs for elective surgeries:
1 – **Cardiothoracic surgery** (including any surgery entering the thorax) is planned at any age.
2 – Patients have a history of **cardio-respiratory disease**.
3 – Patients are having major surgery requiring **post op ICU stay**.
4 – **Active pulmonary infection** is suspected.
5 – Elderly patients **>65 yrs** that have not had a CXR in the last year and do not fall into categories 1-4 above

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Figure 1.

Program permission

yes

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Poster keywords

CXR, patient safety, audit, cost, St James's Hospital

6

The perioperative management of diabetes in emergency vascular surgery.

Omar Ahmed, Adrian Jennings
Russell's Hall Hospital, Birmingham, United Kingdom

Abstract

Institution: Russells' Hall Hospital Dudley.

Introduction: Approximately 10-35% of inpatients suffer from diabetes. At least 10% of the emergency surgery population are diabetic, with the perioperative mortality for diabetes being up to 50% higher [1]. The prevalence of diabetes in the vascular surgery population is recognised, and a growing body of literature highlights poorer outcomes associated with hyperglycaemia.

This project examines the current practises around the perioperative management of diabetes in a vascular specialist centre in patients booked for emergency theatre.

Methods: From March 2020-2021 information was collected from bedside charts, drug charts, case notes and the electronic record. Data was collected on demographics, medications, specialist referral, insulin use, fasting times and capillary blood glucose (CBG) monitoring.

Five criteria were generated based on consensus, clinical judgement, and recommendations in the JBDS-IP guideline 2016 [2].

Results: 45 patients, age range 35-86. 82% had T2DM. 54% of all patients were on insulin, 24% on oral tablets and 22% on both. 26/45 patients missed one meal preoperatively, 18/45 missed 2 or more. Only 56% of patients had their medication managed appropriately. Basal insulin was missed in 44% of patients. 24% of medication errors led to adverse events for the patients. 8 patients in total were receiving intravenous insulin as a variable (n=7) or fixed rate (n=1) infusion. Of these 7/8 missed their basal insulin, and 4/8 were referred to the diabetes team. Monitoring errors occurred in 20% of patients, due to irregular CBG or ketone checks.

Conclusion: Current practises regarding diabetes management, particularly the omission of basal insulin, and monitoring are unsatisfactory.

Suggestions: A collaborative, multidisciplinary approach to the problem is likely to be most beneficial. Vascular, anaesthetic, diabetic and ward teams have been presented this data. Plans are being made for refresher sessions, aide memoirs, and reminders to upskill staff and improve the culture around diabetic management. A re-audit will be done in three months time.

References:

1. N Levy, N Penfold, K Dhatariya. BJA Education, vol 17, pages 129-135. Perioperative management of the patient with diabetes requiring emergency surgery.

2. Joint British Diabetes Societies - IP guideline 2016. Improving standards (diabetes.org.uk).

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Criteria	Target	Outcome
Diabetic team referral for decompensated diabetes	100%	55%
Appropriate management of medications*	100%	56%
VRII only for decompensated diabetes or long starvation periods	100%	85%
CBG monitoring 4-6 hourly, 1 hourly if on VRII	100%	80%
Ketones checked if CBG >15mmol	100%	44%
*as per JBDS-IP guideline		

Program permission

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Poster keywords

Diabetes, Vascular, Perioperative, Audit

7

An Unusual Case of Severe Postpartum Anaemia

Sumitha Bose, Monica Morosan
Norfolk and Norwich University Hospital, Norwich, United Kingdom

Abstract

Introduction: This is a case of critical anaemia which was identified in the postpartum period. Investigations led to the diagnosis of an unusual medical cause of anaemia.

Case: The G3P3 patient had had her 3rd normal vaginal delivery at term. On day 1 postpartum fatigue and pallor were noted so a blood test was requested. This revealed a haemoglobin of 42 g/dL which prompted a review from the on-call team. Estimated blood loss at the time of delivery was 300 mL. Concealed blood loss postpartum was excluded. The patient was ambulant and except for tiredness and pallor, demonstrated no other symptoms associated with critical acute blood loss.

The haemoglobin result was repeated and found to be 44g/dL. After discussion with haematology, further haematological investigations were requested.

Investigations: See attached table.

The results show a normocytic, megaloblastic anaemia with low B12 and folate levels. The patient was commenced on intra-muscular B12 and oral folate supplementation. Follow up in outpatient clinic the day after discharge showed a Hb of 37g/dL. She was transfused 1 unit of blood, readmitted and remained as an inpatient continuing with B12 and folate supplementation until her reticulocyte count rose.

Over the following 6 months her haemoglobin returned to normal range (Hb 143g/dL) and remained so once B12 and folate supplementation had ceased.

Discussion: Erythropoiesis requires erythropoietin and a small but constant supply of B12, folate and iron. Daily requirements are minimal but are increased in pregnancy and supplementation is advised. Folate stores are less extensive than B12 stores so folate deficiency is more likely. To truly differentiate between the two, additional tests are required prior to commencement of treatment.

Of particular interest in this case was both the rapid decline in haemoglobin over a short period of time (Hb 95g/dL to Hb 42g/dL over approximately 6 weeks) and how well this was tolerated by the patient. The presumption of postpartum bleeding which is a more common cause of anaemia on delivery suite was considered first but this was quickly excluded. After this, further investigations and discussions took place and the diagnosis was made.

Conclusion: This uncommon diagnosis was an incidental finding in this patient and demonstrates the extent to which the peripartum patient may be able to conceal and compensate for undiagnosed pathologies. Vigilance is required in the management of these patients. This case highlights the importance of considering all the differential diagnoses and correcting causes.

Image upload

Investigations:

Hb 44g/dL	Ferritin 537 mcg/L (23-300mcg/L)	DAT
MCV 96	B12 <148 ng/L (187-883ng/L)	TTG
MCH 33.7	Folate <2.2 mcg/L (2.7-15mcg/L)	ITA
Blood film: · Tear drop poikilocytes · Occasional red cell fragments with oval macrocytes · Hypersegmented neutrophils but also blood film is leucoery myelocytes and nucleated red cells		

MCV: mean cell volume, MCH: mean cell haematocrit, DAT: direct antiglobulin te transglutaminase, ITA: intrinsic factor antibody

Program permission

yes

Upload final poster

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Poster keywords

Postpartum anaemia, Physiological compensation, Folate deficiency

8

The Handover of Patient Care to Theatre Recovery Staff

Sumitha Bose, Maria Ochoa-Ferraro
Norfolk and Norwich University Hospital, Norwich, United Kingdom

Abstract

Introduction: The peri-operative period can be a complex time during a patient's admission. The Guidelines for the Provision of Anaesthetic Services for Postoperative Care 2019 (GPAS) state that the Anaesthetist is responsible for the patient until they are discharged from Recovery. All inpatients should have a ReSPECT form completed with ceilings of care where appropriate. These may be adjusted in the peri-operative period. Our current Anaesthetic and Recovery documentation does not incorporate changes to resuscitation status and ceilings of care whilst in the theatre suite.

Methods: The handover of care from the Anaesthetist to Recovery staff in 39 emergency and trauma patients over a 2 week period in May 2021 was reviewed. We looked into completion of ReSPECT forms, ceilings of care and when these were to be re-instated in the post-operative period.

Results: 8 out of 39 patients (21%) had discussions about their resuscitation status between Anaesthetists and Recovery Staff. These were not consistently documented. We presented the findings at clinical governance and have proposed additions to the Recovery handover form to standardise the handover process.

Conclusion: We are introducing measures to incorporate resuscitation status and ceilings of care into Recovery documentation to improve current practice.

References:

The Royal College of Anaesthetists (2019). *Guidelines for the Provision of Anaesthetic Services for Postoperative Care 2019*. Retrieved from The Royal College of Anaesthetists: https://rcoa.ac.uk/gpas/chapter-4

UK, Resuscitation Council (2021). *ReSPECT for healthcare professionals*. Retrieved from Resuscitation Council UK: https://www.resus.org.uk/respect/respect-healthcare-professionals

Program permission

yes

Upload final poster

Uploaded file

Poster keywords

Handover of Care, Recovery, Standardised process

9

Peri-operative care of a rare case of Ogilvie's syndrome post Lower Segment Caesarean section.

Alexandra Bouzouki[1], Vikas Gulia[2], Neena Navaneetham[3]
[1]George Eliot Hospital Nuneaton, Nuneaton, United Kingdom. [2]George Eliot Hospital, Nuneaton, United Kingdom. [3]George Eliot hospital, Nuneaton, United Kingdom

Abstract

Introduction

Patient was a 29 y.o, Para 0, BMI 28 , Comorbidities: IBS

Patient had uneventful emergency caesarean section under Spinal anaesthesia at full dilatation for reduced growth at 40 + 1 Gestation.

Methods (Case Report) - Pt developed abdominal pain and distension on day 1 post op LSCS and was commenced on IV antibiotics, fluids and analgesia and a nasogastric tube

(NGT) was inserted and electrolytes were replaced to correct fluid deficit and maintain urine output.

A contrast CT scan for abdomen was done which showed 10 cm distension of the caecum,ascending colon and part of the transverse colon. No evidence of abdominal or pelvic collections but suspected bowel ischaemia.

The patient was taken to theatre for a laparotomy. Haemodynamic cardiac output monitoring with thoracic bioimpedance instituted preoperatively and CVC inserted to stabilise vitals and correct lactic and metabolic acidosis with Inotropic support.

Findings in theatre: Faecal peritonitis confined to pelvis with perforation of caecum

with ischaemic patch, large bowel distension. Patient underwent a right

hemicolectomy and had rectus sheath catheters inserted for pain management post op.

Postoperative patient was monitored in High dependency unit and treated for hypovolemia and metabolic acidosis with fluids and adequate perfusion maintained with vasopressors to prevent AKI.Patient was discharged post operatively to ward subsequently.

Results -

Ogilvie's syndrome or Acute Colonic Pseudo-obstruction is a rare surgical condition with increased mortality and morbidity , that is characterised by acute obstruction and massive dilatation of the colon in the absence of mechanical causes. Its prevalence is estimated to be 0.4%.

The general consensus seems to be that treatment is dictated by caecal diameter.

If the caecal diameter is under 10–12 cm, then conservative treatment with

intravenous fluids and electrolyte replacement and insertion of a nasogastric tube

is recommended.

A caecal diameter that exceeds 10–12 cm warrants surgical treatment by colonic

decompression. Early diagnosis and institution of intensive care has improved outcomes.

Conclusion

Acute abdominal pain in the post op period has various differential diagnoses. This case is to report and show the management and investigations of a more rare situation of bowel distention, ischemia and perforation leading to acute deterioration of a patient, laparotomy and admission to intensive care. Patient was managed as a joint care of obstetricians, colorectal surgeons and Intensive care consultants.

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- Ogilvie's syndrome: management and outcomes Magda Haj, BSc,a Mona Haj, MD,band Don C. Rockey, MDb,Medicine (Baltimore). 2018 Jul; 97(27): e11187. Published online 2018 Jul 6. doi: 10.1097/MD.0000000000011187

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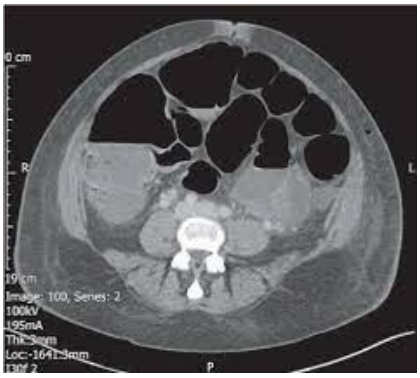

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Poster keywords

Ogilivie, Perioperative, Caecal, Haemodynamic, Multidisciplinary

10

Urgent Prone Spinal Surgery for Central Cord Compression in a Patient on Dual Antiplatelet Therapy (DAPT) following recent Coronary Artery Bypass Surgery (CABG): A Case Report

Catalin Efrimescu, Stacey Darwish, Pádraig Ó Scanaill
Mater Misericordiae University Hospital, Dublin, Ireland

Abstract

Background:

Bleeding is a common complication of spinal surgery, with postoperative bleeding potentially causing symptomatic spinal haematoma leading to consequent neurological deterioration or severe haemorrhage that requires reoperation (1). Continuation of perioperative antiplatelet therapy in the form of aspirin has been advocated in spinal surgery without an increase in bleeding perioperatively (2). However the continuation of dual antiplatelet therapy (DAPT) remains a complex issue (3) despite some studies suggesting no harm or increased blood loss with DAPT preoperative use (4). We describe a case of successful management of urgent spinal surgery for a T9/T10 disc protrusion causing spinal compression in a 72 year old lady on DAPT (Aspirin and Ticagrelor) following recent expedited coronary artery bypass grafting (CABG) post ST elevation myocardial infarction (STEMI). Although the incidence of non-cardiac surgery post CABG is higher in the first 6 months post intervention than after percutaneous revascularisation, the risks of myocardial ischaemia and bleeding are similar (5).

Introduction:

Spinal cord compression with evolving neurology is a surgical emergency that requires operative intervention. There has been a steady volume of spinal surgery performed at our institution* during the COVID-19 pandemic. Continuation of DAPT prior to spinal surgery increases the risk of bleeding (2) however discontinuation may increase the risk of adverse cardiovascular outcomes (2). An individualised, patient specific approach needs to be taken involving a multidisciplinary team discussion prior to proceeding with surgery.

Case Discussion:

A 72-year-old lady was referred to the National Spinal Surgical Team for operative intervention of a T9/T10 lesion causing cord compression with evolving neurology (T9 ASIA-A). This spinal lesion was diagnosed following presentation to another institution for STEMI work up and subsequent three-graft CABG on a background of hypertension and type-2 diabetes mellitus. Six weeks into her recovery after an uneventful CABG, she developed acute severe neurology requiring urgent surgical review by the Spinal Surgery and transfer to our institution. Aspirin and Ticagrelor had been continued up until the day prior to surgery. Following discussion with the anaesthesiology and spinal surgical team, general anaesthesia was induced following the placement of invasive haemodynamic monitoring. Prone position was achieved, ensuring meticulous care to the recent sternotomy wound site. Blood products were made available in anticipation of bleeding. Decompressive thoracic spinal surgery and fusion was performed from T8 – T11 using O-arm and stealth navigation. The intraoperative blood loss was approximately 600mls with one pool of platelets being utilised intraoperatively. The patient recovered well postoperatively, with hypoactive delerium being diagnosed at ward level, which was managed non-pharmacologically. The patient was transferred back to the referring insitution for ongoing cardiac and spinal rehabilitation.

Conclusion

The perioperative multidisciplinary input proved invaluable in the successful management of the challenges associated with this case: advanced age and frailty, recent STEMI and CABG, impaired heart function, requirement for urgent spinal surgery while on DAPT, prone position following recent sternotomy and post-operative delirium. This case highlights the importance of perioperative communication, team work and collaborative thinking in treating thishi-risk surgical patient.

References:

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3. Surgical Neurology International. 2021;12(302):1-4
4. *Clin Orthop Surg*. 2018;10(3):380-384. doi:10.4055/cios.2018.10.3.38
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Poster keywords

Spine Surgery, Antiplatelets, Perioperative Medicine, Shared Decision Making, Prone

11

Postoperative opioid prescribing quality improvement initiative in University Hospital Waterford

Kirsten Joyce, Niamh Molloy, Deirdre Mannion, Kim Caulfield
University Hospital Waterford, Waterford, Ireland

Abstract

Introduction

Opioids form an integral component to the multi-modal analgesia approach in the management of postoperative pain relief in all surgical patients. However, it is becoming increasingly documented particularly in the USA that the perioperative use of opioids can contribute to persistent opioid use postoperatively[1]. Opioid use is a significant public health concern. We believe there is a need to protocolise our opioid prescribing to help prevent such debilitating opioid dependence in Ireland.

Aims and Methods

The aim of our project was to audit the current peri-operative prescribing of opioids in elective, non-day case colorectal patients at UHW, in line with the recently published “Best Practice Guideline on the prescription of opioid medications” by the RCOA.[2] This included the recognition of pre-operative, intraoperative and postoperative opioid use with particular attention to sustained-release formulations. Patients were followed up on the ward postoperatively (between Days 1-6) to assess pain scores and to note any changes made to analgesia plans. Pain was assessed using the numerical rating scale (NRS).

Results

During May 2021, thirteen patients met audit criteria. Of these, there was marked heterogeneity of intraoperative analgesia received, with 62% of patients receiving IT opioids, 15% receiving epidural and 23% receiving only IV opioids. 12 out of 13 patients had a documented postoperative analgesia strategy e.g., epidural or PCA. Only 3 of these patients had plans created for the discontinuation of these at Day 3. Postoperative pain scores also varied considerably (best = 0-8; worst = 4-10). No patient had a documented discharge prescription; therefore, it is unknown if these patients were discharged home with opioids.

Conclusions

While our initial audit has several limitations, it has highlighted areas in which we can improve the delivery of perioperative care to our patients. This includes the potential development of a postoperative patient leaflet on weaning opioids postoperatively, a formalised post-epidural/PCA opioid protocol, and the education of non-consultant hospital doctors on the avoidance of sustained-release opioids at discharge. We intend to re-audit this cohort after the introduction of these changes to assess efficacy.

References

1. Gomes T, Tadrous M, Mamdani MM, Paterson JM, Juurlink DN. The Burden of Opioid-Related Mortality in the United States. *JAMA Netw Open*. 2018;1(2): e180217.

2. Srivastava, Devjit et al. Surgery and opioids: evidence-based expert consensus guidelines on the perioperative use of opioids in the United Kingdom. British Journal of Anaesthesia, Volume 126, Issue 6, 1208 - 1216

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Poster keywords

Opioid, Patient safety, Quality improvement

12

Is Macintosh immune to SARS-CoV2? A quality improvement initiative on the impact of Covid-19 on learning direct laryngoscopy among beginner anaesthesiology trainees in Cork University Hospital.

Dr Liam Murphy, Dr Corina Soare, Dr Paudie Delaney, Dr Padraig Mahon, Dr Frank Loughnane, Dr Niamh McAuliffe
Cork University Hospital, Cork, Ireland

Abstract

Introduction:

The Covid-19 pandemic has had a significant impact on anaesthesia training worldwide, particularly in regards to airway instrumentation. A shift in practice to ensure the safety of the Anaesthetist performing endotracheal intubation has brought video laryngoscopy to the forefront, making direct laryngoscopy a less desirable option. As a consequence, beginner anaesthesia trainees had less exposure to direct laryngoscopy training, creating a gap in practical skills acquisition. Data on this deficit in training were quantified and addressed by organising a departmental Airway Training Day.

Methods:

An online survey to assess the level of experience and confidence in regards to direct laryngoscopy was distributed to the beginner anaesthesia trainee cohort in Cork University Hospital (n=8), at the five-month stage of training. A one-day workshop including a series of interactive lectures followed by a practical session was designed to cover both the theoretical and practical aspects of performing direct laryngoscopy using Macintosh laryngoscopes. The cohort were followed up with a repeat survey one month after training.

Results:

Initial responses were analysed, pre and post- airway training results were analysed, 100% of respondents (n=8) felt they would benefit from increased exposure to direct laryngoscopy. All trainees felt their skills with direct laryngoscopy did not correspond to their stage of training prior to the airway training day, compared to 85.7% post training. In addition to this, 33% felt they would not be confident managing an easy airway (C+L 1 or 2) independently. The complication rate of direct laryngoscopy was 50% with failure to visualise the vocal cords being most common.

Conclusion:

The Covid-19 pandemic has had a drastic impact on beginner anaesthesia trainees' ability to access practical, real-world training in direct laryngoscopy, a vital, foundation skill in Anaesthesia; and has resulted in significantly decreased skill proficiency in this area amongst the cohort.

References:

1. Cook, T. M., El-Boghdadly, K., McGuire, B., McNarry, A. F., Patel, A., & Higgs, A. (2020). Consensus guidelines for managing the airway in patients with COVID-19: Guidelines from the Difficult Airway Society, the Association of Anaesthetists the Intensive Care Society, the Faculty of Intensive Care

Medicine and the Royal College of Anaesthetists. Anaesthesia, 75(6), 785–799

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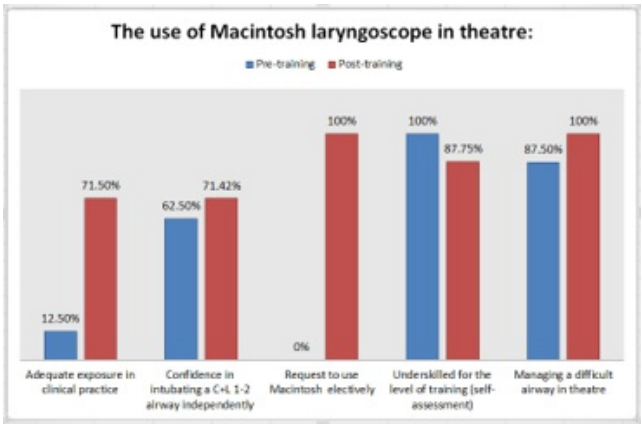

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Poster keywords

Airway, laryngoscopy, Education

13

Post-operative complications following TAVI are less associated with pre-procedural immune status than following open surgical AVR

Colin Hamilton-Davies[1,2], Zlatka Belamaric[2], Michael Masucci[3], James Fullerton[4], Paul Scully[1], Andrew Smith[2,1], Michael Mullen[1]

[1]BartsHeart Centre, London, United Kingdom. [2]UCL, London, United Kingdom. [3]Kings College London, London, United Kingdom. [4]Oxford University NDORMS, Oxford, United Kingdom

Abstract

Introduction

We have demonstrated in previous studies that there is an inverse relationship between the development of perioperative complications and the pre-operative antibody levels to endotoxin core (EndoCAb)[1]and to staphylococcus aureus[2]in patients undergoing open cardiac valve surgery. It has also been demonstrated that there is a reduced but not insignificant inflammatory response and lower levels of circulating endotoxin associated with transcutaneous aortic valve implantation (TAVI) when compared with open surgery[3].

This study was to determine whether the association between complications and pre-procedural antibody levels is also present with patients undergoing TAVI, where the immunological threat may be less marked than with open surgery.

Methods

We looked at the pre-operative immune status of 112 patients scheduled to undergo TAVI by measurement of EndoCAb, a-toxin and teichoic acid antibody levels using ELISA assay. All patients were risk-scored using Euroscore 2 and British cardiovascular intervention society (BCIS) TAVI risk scoring. Outcome measures included post-procedure length of stay and infection rate.

Results

Fig.1

The patient cohort was divided into quartiles based on antibody levels. A reduction in length of stay was observed as antibody levels increased. However, the differences between group means for length of stay were not statistically significant as determined by one-way ANOVA ($F(3,108)=1.050$, $p=0.374$). Similarly, infection rates in each quartile were not statistically different ($p=0.353$). No differences were seen in Euroscore 2 ($p=0.859$) or BCIS TAVI risk score ($p=0.353$) for the quartile groups.

Conclusion

Whilst there does still seem to be a relationship between pre-operative antibody levels and outcome following TAVI there is no statistically significant association even with greater number of patients than

the previous two open surgical studies. This suggests that, for patients with less favorable immune function, the risk of the TAVI procedure may be less than that of a surgical aortic valve replacement (AVR).

References

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2. Smith et al. J Periop Med 2018;7:20.
3. Adrie et al. Shock 2015; 43(1): 62-67.

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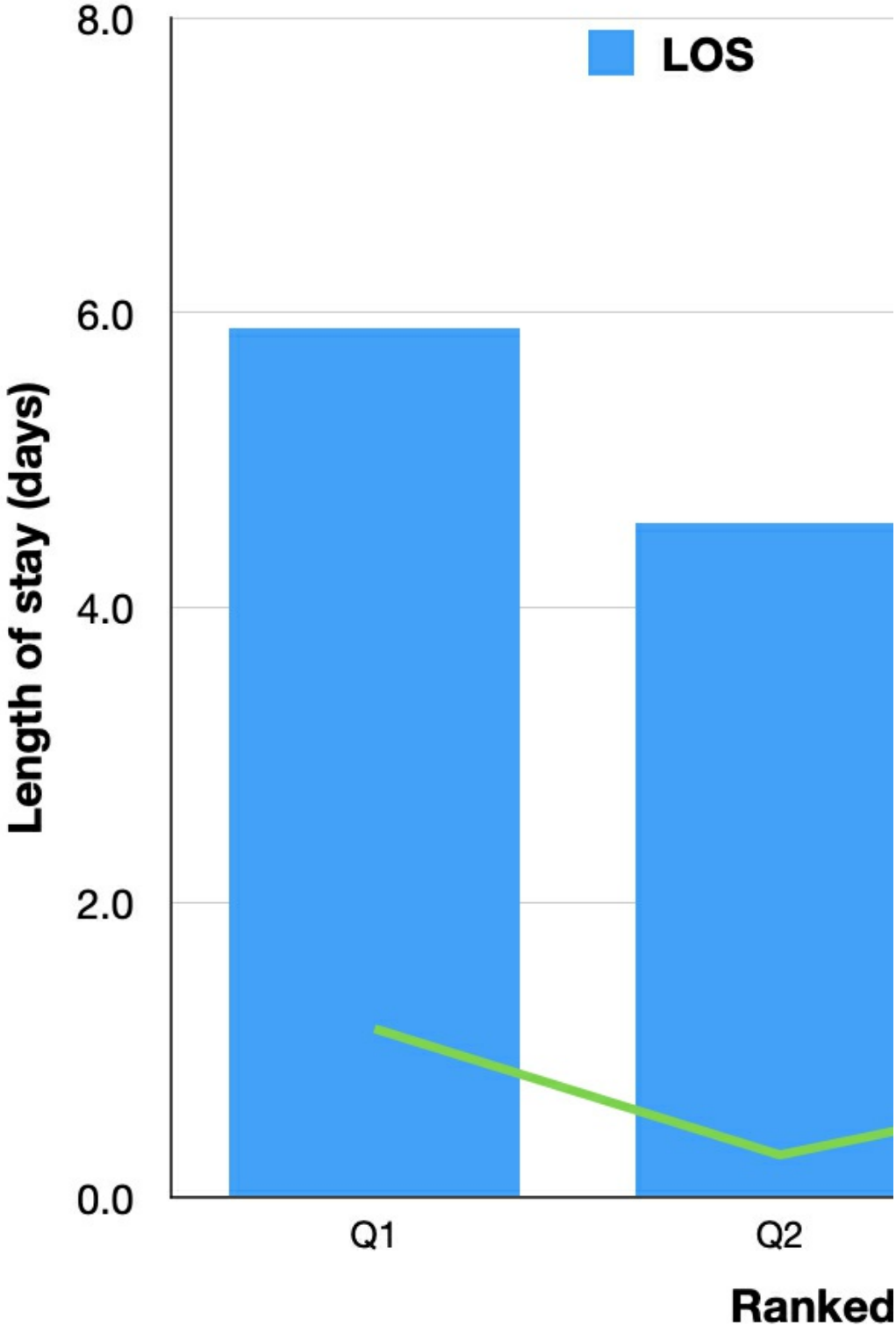

BCIS TAVI (%)	2.81	2.35
Euroscore-2 (%)	4.01	5.22

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Poster keywords

TAVI, endotoxin, staphylococcal, immunity, outcome

14

The effect of pre-operative immune status on outcome in patients undergoing TAVI appears to be related to the nature of the immunogenic threat.

Colin Hamilton-Davies[1,2], Zlatka Belamaric[1], Philip Marshall-Lockyer[1], Michael Masucci[3], James Fullerton[4], Paul Scully[2], Andrew Smith[1,2], Michael Mullen[2]
[1]UCL, London, United Kingdom. [2]Barts Heart Centre, London, United Kingdom. [3]KCL, London, United Kingdom. [4]Oxford University, NDORMS, Oxford, United Kingdom

Abstract

Introduction

We have previously studied patients undergoing open surgical aortic valve replacement (AVR) and described the relationship between the development of post-operative complications and antibody levels to likely peri-operative threats, namely endotoxin and staphylococcus[1,2].

In patients undergoing cardiopulmonary bypass there is a known risk of endotoxaemia through hypoperfusion of gut mucosa. The large sternal wound exposes the patient to risk of staphylococcal infection. Recent work has demonstrated the reduced levels of endotoxin measured in transcutaneous aortic valve implantation (TAVI) patients along with evidence of less inflammatory activation compared with that in patients undergoing surgical AVR[3,4].

The purpose of this study was to determine if the inverse relationship of pre-operative antibody levels to endotoxin core and staphylococcus was equally maintained in the TAVI population.

Method

112 patients scheduled to undergo TAVI procedure had preoperative serum analysed by ELISA assay for levels of endotoxin core antibody (EndoCAb), a-toxin and teichoic acid antibodies. Outcomes of length of stay and rate of infection were measured.

Results

Fig 1.

Figure 1. Patient cohort divided into quartiles for each measured antibody level. Mean length of post-operative stay for each quartile (blue bars) with trend line (blue line) and percentage in each group who develop a clinically significant infection (green line) group. (Q1––quartile 1, etc.).

A downward trend of length of stay relative to increasing antibody levels was observed fora-toxin and teichoic acid quartiles. Comparatively, length of stay across EndoCAb quartiles appeared unaffected. No substantial changes in rate of post-operative infection were noted across EndoCAb, a-toxin and teichoic acid levels.

Conclusions

The association between antibody level and length of stay appears to be more closely correlated with the staphylococcal antibody levels whereas there appears to be little correlation with the endotoxin antibody levels.

Reduced risk of splanchnic hypoperfusion when undergoing a TAVI procedure compared with open cardiac surgery procedures may reduce exposure to endotoxin. Subjects with lower levels of antibody to endotoxin are not exposed to this specific immunologic challenge and therefore do not suffer from the adverse effect of impaired immunity.

References

1. Hamilton-Davies C et al. Chest 1997; 112:1189-96.
2. Smith A et al. Perioperative medicine 2018; 7:20.
3. Adrie C et al. Shock 2015; 43:62-7.
4. Kimura N et al. Am J Cardiol 2020; 128:35-44.

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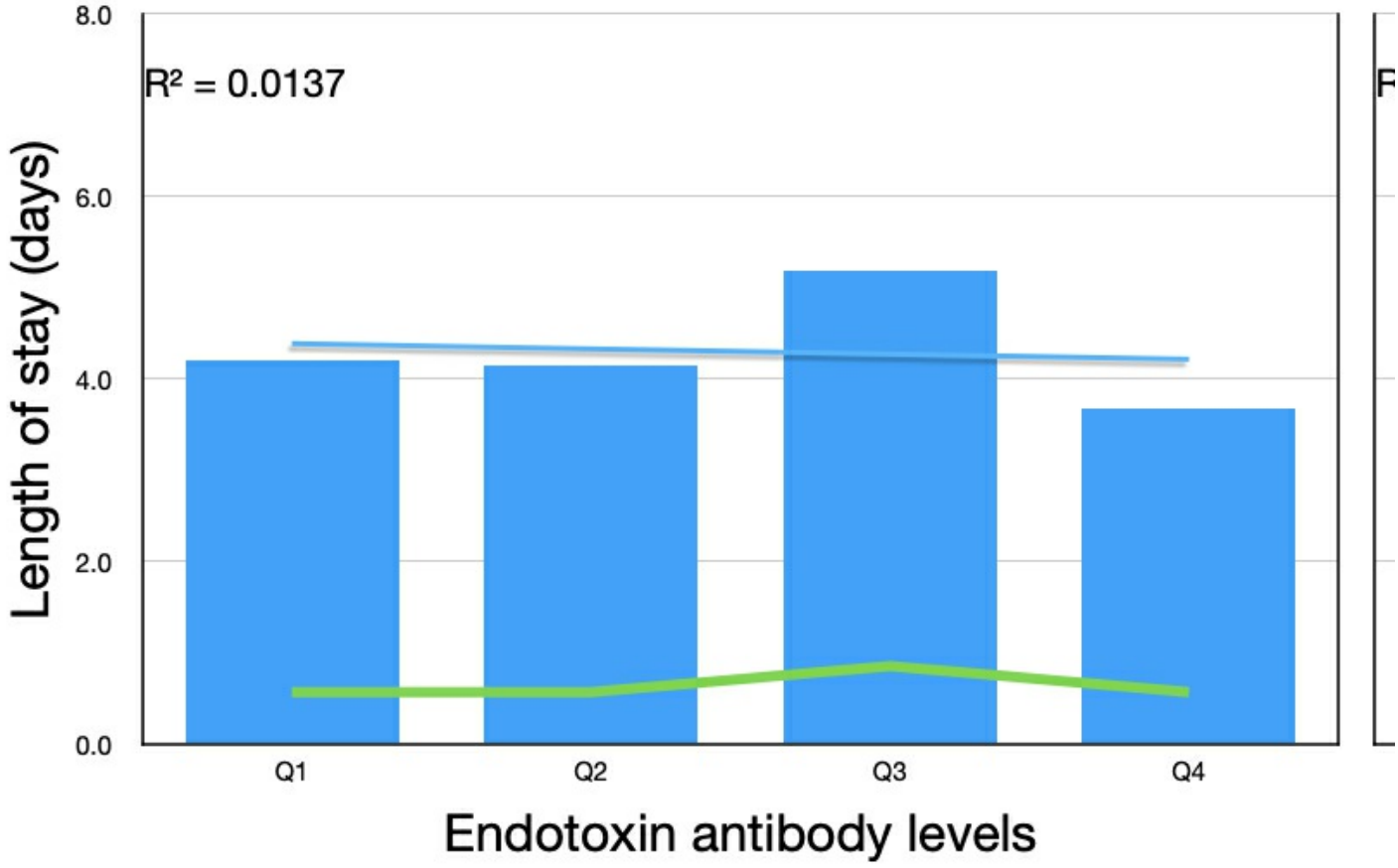

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Poster keywords

TAVI, endotoxin, staphylococcal, immunity, outcome

15

A service evaluation examining the requirement for Level 2 critical care in a major trauma centre

Paul Galea[1], Kirsten Joyce[2], Sarah Galea[2], Frank Loughnane[2]
[1]University College Cork, Cork, Ireland. [2]Cork University Hospital, Cork, Ireland

Abstract

Critical care provision is fundamental in all developed health systems in which severe disease and injury is managed. This is especially true in major trauma centres and high-acuity establishments, where acutely unstable patients can be admitted at any time, requiring clinical monitoring and interventions appropriate for their burden of illness. This single-centre, prospective service evaluation applied validated scoring systems to a surgical population, sampling and following those considered “high-risk” through to discharge or death, alongside all intensive care unit (ICU) admissions during 2019. Primarily we aimed to quantify the number of patients objectively suitable for Level 2 critical care, conventionally provided in a high-dependency unit (HDU) setting. Secondary outcome measures included ICU readmission rate, in-hospital mortality, and delays to ICU admission and discharge. Of the “high-risk” surgical patients, more than eight per week were found to have peri-operative Portsmouth Physiological and Operative Severity Score for the enUmeration of Mortality and morbidity (P-POSSUM) scores that would advocate critical care admission. Only one individual received scheduled peri-operative critical care. Post-operative mortality in this group was 6.1%, though none of these patients was admitted to ICU prior to death. There were 605 ICU admissions in 2019, with 32.1% of admitted days spent at the equivalent of Level 2 critical care, which could have been administered in a HDU if one was available. The ICU readmission rate was 6.45%. This data demonstrates substantial unmet critical care needs, with patients not uncommonly managed in clinically inappropriate areas for extended periods due to delays accessing ICU. A designated HDU may mitigate clinical risk from this subgroup, reducing morbidity and in-hospital mortality.

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Poster keywords

Critical Care, High Dependency, Trauma Centre, HDU, Level Two Care

16

Non urgent referrals to orthopaedic on call team

Ahmed Mattar
Princess royal university hospital, orpington, United Kingdom

Abstract

BACKGROUND: Many referrals to the orthopaedic on call team from the other wards are not urgent. This in turn leads to making the on call team busier and even sometimes makes them not able to prioritize which patients need to be seen at first. We discussed with many SHOs in the orthopaedic department who find this issue as a big problem as most of the times take from their time over the real urgent patients in the Emergency department. Hence, was the idea to have an online referral system on the EPR with some criteria of the non urgent referrals. If these criteria are fitted, so the referral can be done online, then to be reviewed by the on call team and decide it's urgency and work on this based on the given details on the referral request. Also, if the referral is done over the phone and the team saw it's not urgent, then can ask the referring team to do the referral online to be seen by the ortho team later on.

Additionally, sometimes we have referrals from the other wards for non urgent cases without having the full needed information for the referral , which in turn wastes the team's time to go and see the patient due to the insufficient needed information.

AIM :

-To help the on call team to prioritize the referrals depending on their urgency.

-To make it easier for the Ortho team to have the enough information about each non urgent referral by putting mandatory information need to be filled out in order to request the online referral.

OBJECTIVES

-Make an online referral application on the EPR for any ward non urgent referral which will fit the non-urgent criteria.

- Collecting data from 100 ward referrals done over the last month and checking the urgency of each referral and if needed to be seen immediately or can wait.

Methodology:

Sample size: 179 referrals

Inclusion criteria:. Any non-urgent referral done to the orthopaedic on call team .

How will the sample be identified? From the On call SHO &reg

Audit period: 3 months (May, June, July2021)

Data collection type: Retrospective

Results:

46 urgent

143 non urgent

Conclusion:

Electronic referral Form

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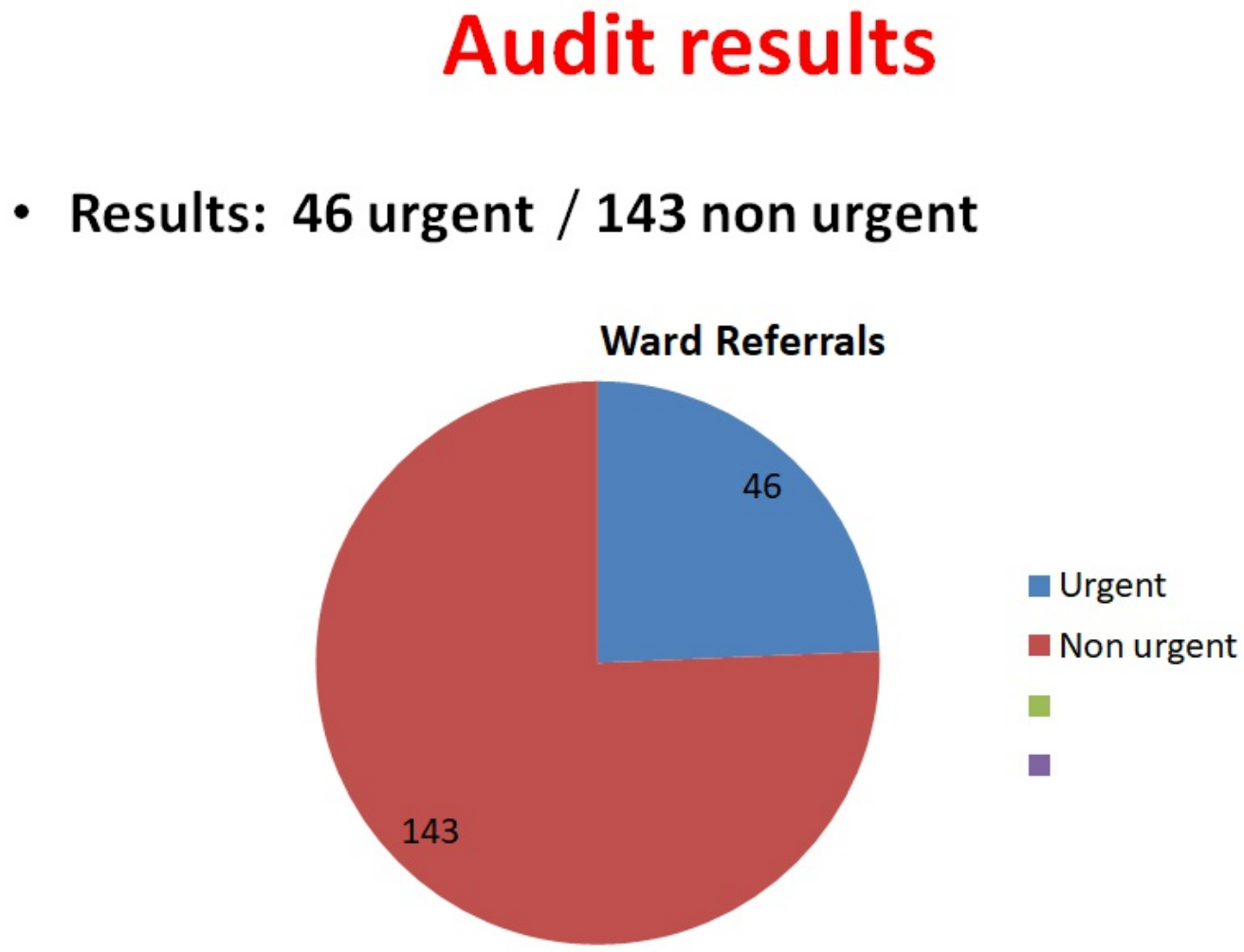

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Poster keywords

non urgent, referral, orthopaedic, on call, wards

17

Refining the perioperative pathway in regional anaesthesia; a continuous service improvement project in Western Australia

Toby Shipway, Huw Wilkins
Royal Perth Hospital, Perth, Australia

Abstract

Introduction

Royal Perth Hospital in Western Australia is the tertiary trauma centre for an area 2.6 million km^2. There is a well-established and dedicated regional anaesthesia service which serves this complex patient cohort. In 2016, a service evaluation was undertaken which found that between 12 and 24 hours post regional block, pain management could be improved. The aim of this service improvement project was to review the impact of changes implemented in 2016, build on current practice and to evaluate patient satisfaction

Methods

Patients receiving care from the perioperative regional anaesthesia service were included sequentially. Exclusion criteria included age <18; concurrent neuraxial techniques, regional catheter techniques. Data collected included demographics, block type, procedure type, perioperative analgesia, visual analogue pain scores in the initial 24hrs and overall patient satisfaction using a validated questionnaire [1].

Results

Fifty patients were included; the median age was 55. Fifty-two percent of patients were ASA III, while 56% were emergency cases. Ninety percent of patients in recovery had no or mild pain. The prescription of long acting opioid had increased from 42% in 2016 to 68%. As required strong opioids were prescribed in 76% of cases but only administered in 54% of these. All patients were satisfied (10%) or completely satisfied (90%) with the interaction with the anaesthetist. Four patients (8%), however, described sudden onset pain when the block wore off. Ninety-eight percent of patients would have regional anaesthesia again.

Conclusion

The majority of cases included were high acuity patients with severe systemic disease. Most of the patients were comfortable in the immediate post-operative period and satisfied with their care. It was found that since 2016, there has been a significant increase in the prescription of long-acting opioid (42% vs 68%), however there remains a period between 12 and 16 hrs post block where the analgesic needs of the patients could be further optimised. Interestingly, at 24hrs, median pain scores in the successful block group were slightly higher than in the unsuccessful group (*fig 1*), which has been described previously [2]. Since 2016, improvements have been made in the overall pain (*fig 2*) and block failure rates however further gains can be made through focused nurse / patient education and dispensing a post-operative dose of modified release analgesia in recovery.

References

1. Ironfield CM *et al*. Reg Anesth Pain Med. **39**: 48-55. 2014
2. DeMarco JR *et al.* . Arthroscopy. **27**: 603-1. 2011

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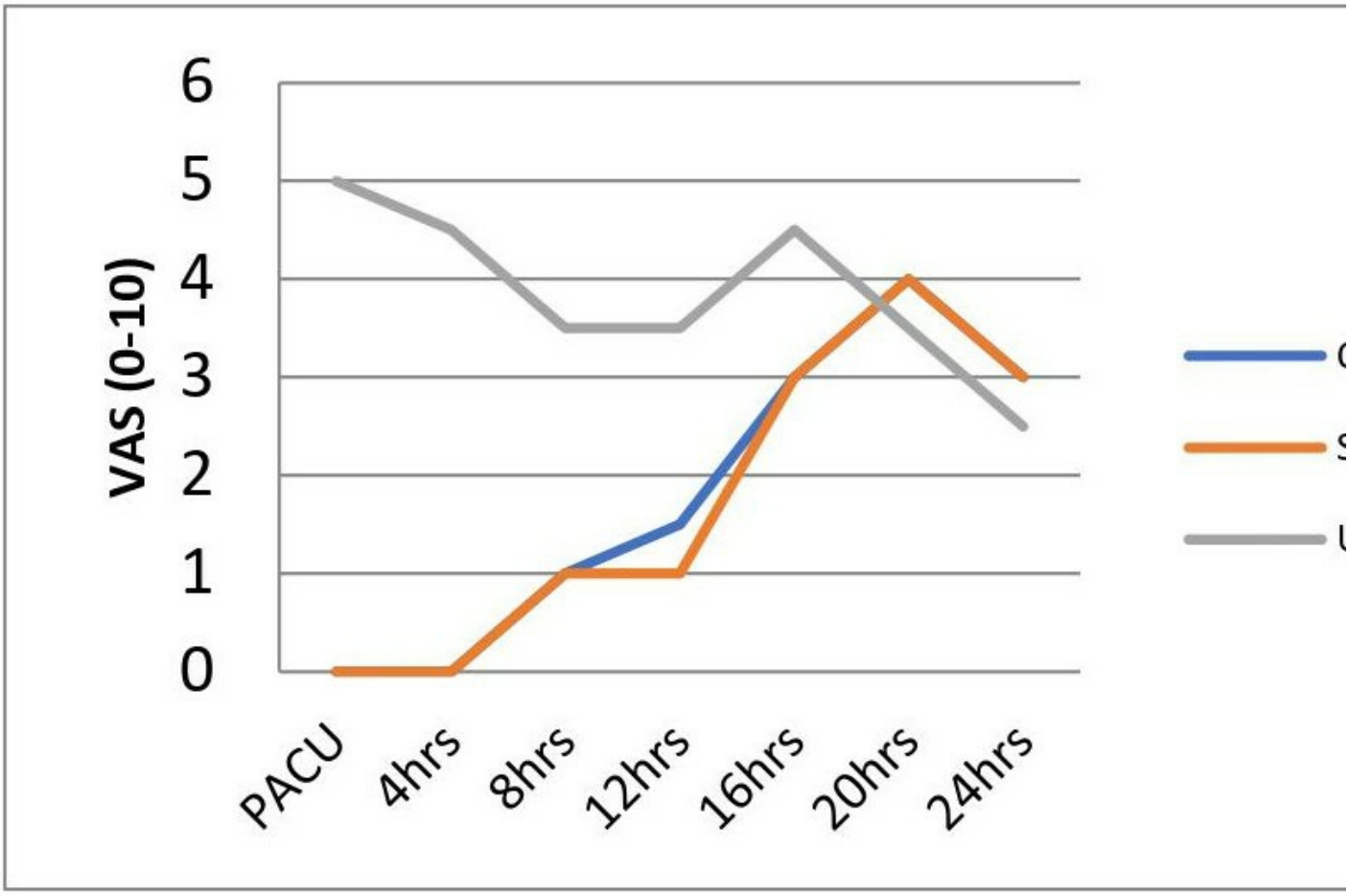

Figure 1: Pain scores during first 24hrs in successful versus unsuccessful blocks

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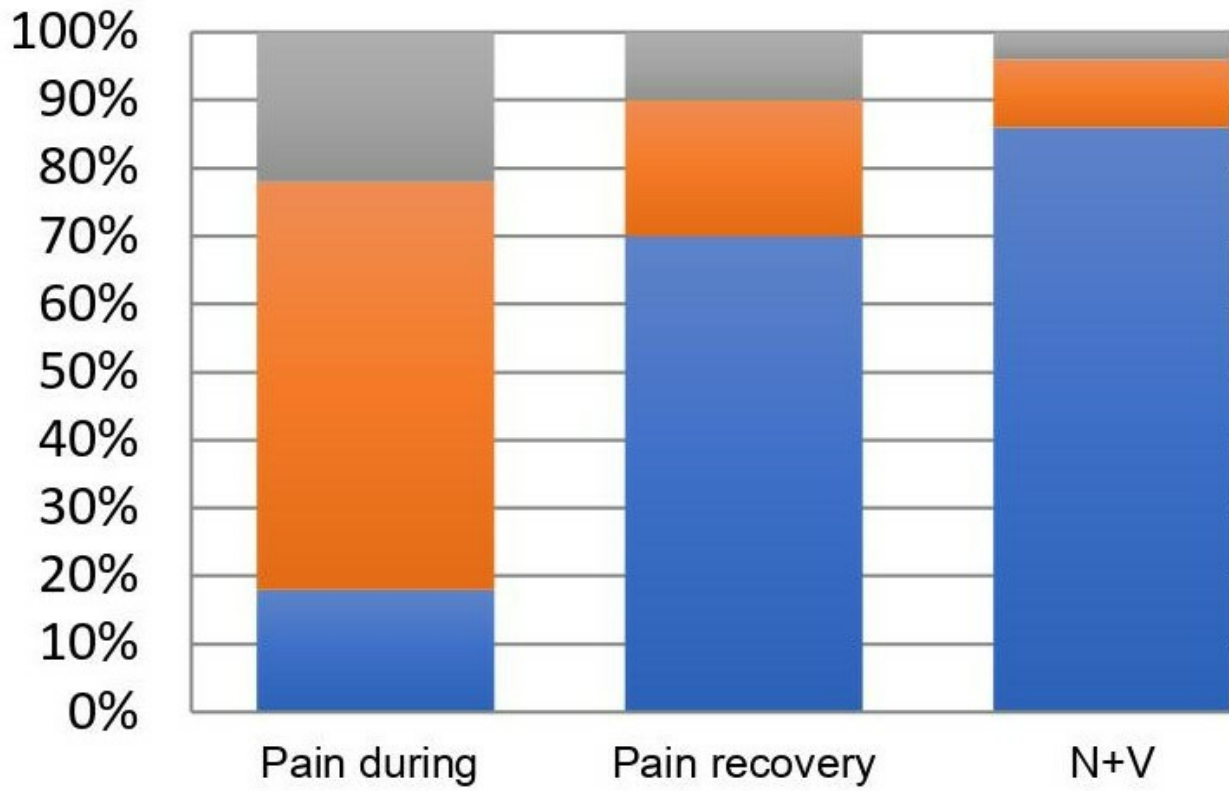

Figure 2: Pain and discomfort reported by patien anaesthesia

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Poster keywords

Regional Anaesthesia, Service improvement, Sudden onset pain, Patient Satisfaction

18

THE UNIVERSITY COLLEGE HOSPITAL, LONDON PERIOPERATIVE MEDICINE FELLOWSHIP PROGRAMME

Supriya Dsouza, Eleanor Powell, Isra Hassan, David Walker
University college hospital, London, United Kingdom

Abstract

Introduction

Perioperative medicine (POM) is a rapidly growing multidisciplinary subspecialty driven by complex surgical populations and advancing surgical techniques. In the UK the specialty is largely led by anaesthesiologists, well placed to understand the pathological insult of surgery and the opportunities for patient optimisation and management. In 2021 the Royal college of Anaesthetists updated its professional training curriculum with greater emphasis on competence in POM, but until recently formal training opportunities were limited.[1] The ongoing pandemic has introduced many challenges to specialist training and sign-offs, with > 80% of trainees saying disruption caused by COVID reduced their access to the learning they need to progress their careers.[2] The pandemic has resulted in cancellation of around 1.5 million elective surgeries in an effort to divert healthcare resources for the care of patients with COVID.[3] In such times, fellowships like these give clinicians opportunities to continue their professional development and gain expertise beyond the curriculum.

Methods

University College Hospital (UCH) has been a leader for providing POM education for more than 10 years and in 2015 introduced a POM clinical fellowship to complement its fully online MSc education programme. The fellowship gives experience in all aspects of the *perioperative journey*, working with patients contemplating, undergoing and recovering from surgery. The MSc introduces the evolving epidemiology of surgical care, a critique of historical pathways and the lessons learned. Fellows are introduced to newer concepts of care including shared decision making, pre-habilitation and the better use of data to inform practice. The dissertation component of the MSc is an opportunity for students to get involved in clinical research and Quality Improvement within the unit, where there is a strong emphasis on peer-review publication of their work.

Results

Each year 15 fellowship places have been taken up annually and till date, more than 70 fellows from around the world have undertaken training at UCH. This year fellows have been instrumental in setting up a new 12-bedded augmented postoperative care area which has included both ICU and HDU care. These beds are allocated based on patient risk profiling and staffed by a dedicated POM team reporting surgical outcomes and patient experience metrics. Fellows actively deliver Enhanced Recovery After Surgery (ERAS) guided therapies and follow patients long into their ward-based recovery, supporting surgical colleagues with medical aspects of care to avoid possible failed rescue of patients who develop significant postoperative complications.

The fellowship has had to evolve rapidly over the last year, as the pandemic caused cancellation of elective surgery, closure of preassessment clinics and PACUs. This programme has worked hard to

maintain safe surgery by operating a “green” elective surgical pathway during the pandemic.

Conclusion

Despite the pandemic, opportunities to practice POM are still available, resources need to be utilised and opportunities maximized to make use of these. This fellowship combining academic study with clinical experience within an integrated perioperative care pathway has proved popular with an international community of clinicians and resulted in advancement in clinical services, education, training and research.

References

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2. General Medical Council, National Training survey 2020. Available from https://www.gmc-uk.org/national-training-surveys.
3. Dobbs TD, Gibson JAG, Fowler AJ, et al. Surgical activity in England and Wales during the COVID-19 pandemic: a nationwide observational cohort study. British Journal of Anaesthesia. 2021 Aug;127(2):196-204.

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OPPORTUNITIES
• Integrated masters programme
• NELA periop reviews
• Surgical pre assessment clinics
• Shared decision-making clinics
• CPET clinics
• Perioperative ECHO course
• Teaching opportunities
• Perioperative research opportunities
• Operating Room experience
• Pre-habilitation /CPET clinic experience
• Management and service development opportunities

Table1 Examples of fellowship opportunities

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Poster keywords

Perioperative medicine , Fellowships, Training

19

The effects of exercise prehabilitation in upper GI oncology patients undergoing surgical resection: A systematic review.

Emma Tyson[1], Muzaffar Malik[2], Chris Jones[3]

[1]MSc student, Brighton and Sussex Medical School, Brighton, United Kingdom. [2]Senior lecturer, Brighton and Sussex Medical School, Brighton, United Kingdom. [3]Anaesthetic Consultant, Royal Surrey County Hospital, Guildford, United Kingdom

Abstract

Introduction

Prehabilitation programs have only recently been established as a method for enhancing patient postoperative outcomes in major surgery by improving their preoperative functional capacity(1). Currently, all programs are designed locally as no expert consensus has been determined on the optimal strategy(2). This systematic review aims to look specifically at the feasibility of exercise prehabilitation in patients undergoing upper gastrointestinal (UGI) cancer surgery and to evaluate the effectiveness of these prehabilitation programs on post-operative outcomes.

Methods

A systematic literature search was completed in May 2021 of the following databases: Medline, Embase, PubMed and CINAHL as well as a grey literature search. The search was conducted for trials evaluating the effects of exercise prehabilitation in UGI patients using an objective functional capacity measurement pre- and post-program prior to surgery. Both randomised controlled trials and high-quality non-randomised studies were included. Study characteristics, the composition of the individual prehabilitation programs, functional capacity changes post-program and postoperative outcomes were obtained. The primary outcome was the change in functional capacity following the prehabilitation program. If significant changes in capacity were found, postoperative outcomes were then evaluated as secondary outcomes.

Results

Eight studies were included in this review: 2 RCTs, 2 feasibility studies and 4 observational prospective cohort studies. A total of 402 patients were in the prehabilitation groups across the studies, 208 of which underwent neo-adjuvant chemotherapy. There was significant heterogenicity amongst the studies including the type of exercise modality, duration, and intensity of the programs. A significant improvement in functional capacity following the programs was seen in 6 of the studies, 3 using the 6-minute walking distance (6MWD), 2 using cardiopulmonary exercise tests (measuring VO_2 max) and 1 utilising both methods. One study observed a significant improvement in length of stay (median 23 vs 30 days, p=0.045), but no change in overall incidence of postoperative complications.

Conclusion

This systematic review has shown that it is feasible to conduct preoperative exercise-based prehabilitation programs in UGI cancer patients and that these programs can significantly improve their functional capacity prior to surgery. Whether this improvement leads to superior postoperative outcomes is yet to be established.

References

1. Banugo P, Amoako D. Prehabilitation. BJA Education. 2017;17(12):401-5.

2. Scheede-Bergdahl C, Minnella E, Carli F. Multi-modal prehabilitation: addressing the why, when, what,

how, who and where next? Anaesthesia. 2019;74:20-6.

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Study	Design	Typ Surg
Dunne et al, 2016	RCT	Liver re for colo metasta
Minnella et al, 2018	RCT	Oesoph cancer
Mikami et al, 2020	Cohort	Pancrea cancer

Ngo-Huang et al 2019	Cohort	Pancrea cancer
Nakajima et al, 2019	Cohort	Open abdomi surgery Hepato- Pancrea Biliary (cancers
Halliday et al, 2021	Cohort	Oesoph Cancer

Yamamoto et al, 2017	Feasibility	Gastric
Valkenet et al, 2016	Feasibility	Gastroi l cancer (Pancrea Liver, In Gastric Oesoph

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Poster keywords

Prehabilitation, Upper GI surgery, Onco-anaesthesia

20

Post-operative Fluid Management for Hepatic Resections

Julia Freyer Martins Pereira, Catherine Britton-Jones, Sara Churchill
University Hospital of Wales, Cardiff, United Kingdom

Abstract

Introduction: Hepatic resections are the available treatment options for primary and secondary hepatic tumours [1]. Optimal fluid management in hepatic resections is vital but it is complicated to achieve a balance between adequate quantity (to ensure optimal end organ perfusion) and overhydration (potentially resulting in ascites and post-operative pulmonary complications) [2]. At present, there is no consensus among researchers and clinicians on the optimal post-operative fluid resuscitation for hepatic resections.

Objective: The aim of this audit was to investigate existing post-operative fluid management of hepatic resections and offer guidance and improvement in the green zone post-anaesthesia care unit (PACU) of the University Hospital of Wales, Cardiff. The first audit cycle investigated current management followed by introducing a postoperative hepatic resection flowchart. Followed by the second audit cycle re-auditing fluid management using the flowchart.

Methods: The first audit cycle included 10 patients. The re-audit cycle resulted in 25 patients. Standard demographic data including age, gender, type of operation, time in theatre (mins), blood loss (ml), pringle time (mins), and intraoperative fluid (type & volume) were recorded for both groups. Highest intra-operative lactate was only recorded in the re-audit group. Recorded postoperative information for both groups included volume for the first 24 hours (or until discharge from PACU if discharged before 24 hours), total fluid balance within first 24 hours (or until discharge from PACU if discharged before 24 hours), and highest lactate documented in PACU. In addition, the re-audit group also recorded the type of postoperative fluid given.

Results: Overall, there has been a decrease in mean and median volume given to patients in the first 24 hours post-operative period post flowchart introduction (see figure 1). The maximum volume given to patient was similar in both groups (11453 vs 11100ml). However, there was a significant change in minimum fluids given (5404ml vs 3020 ml in the post-flowchart group). Furthermore, a positive correlation can be observed between total volume of fluid given in the first 24 hours and the highest recorded lactate.

Conclusion: Introducing a fluid management flowchart resulted in better targeted fluid resuscitation in hepatic resections post-operatively.

References:

[1] David R Holt, David Van Thiel, Steve Edelstein, and John J Brems. Hepatic resections. Archives of Surgery,135(11):1353–1358, 2000.

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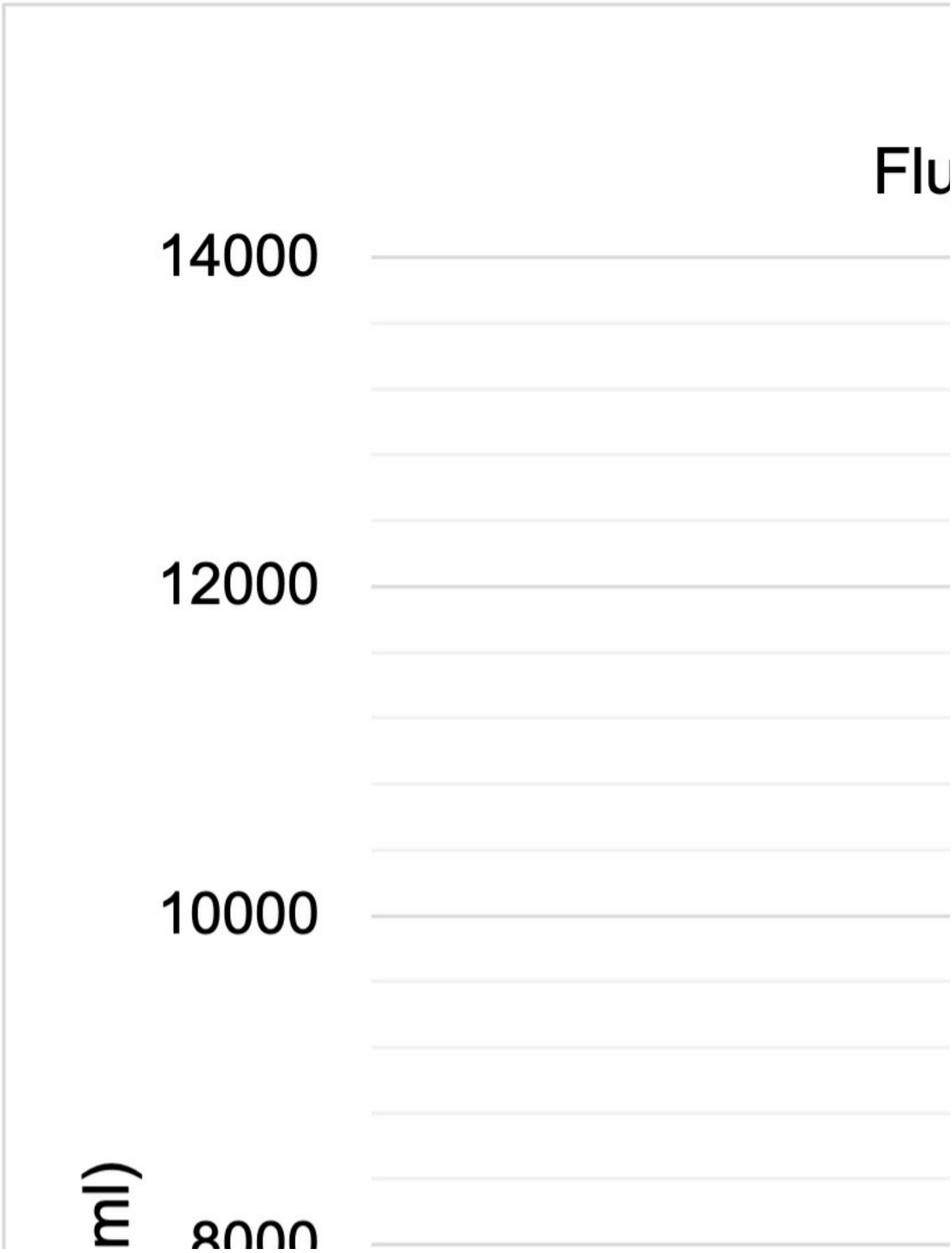

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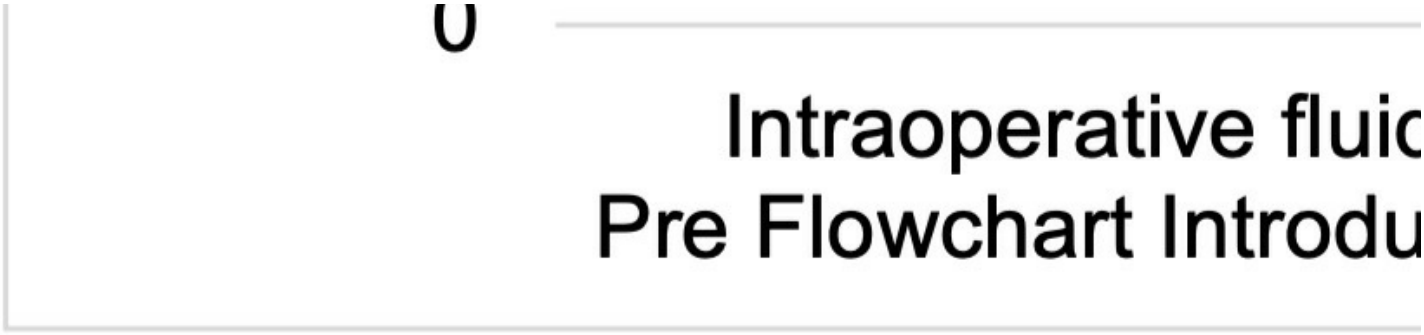

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Poster keywords

Hepatic resection, Fluid management, Post-operative optimisation, Targeted fluid resuscitation

21

Service Evaluation of Spinal in Day surgery unit

Nike Odeleye, Banu Ergezer, Gary Summers, Sade Okutubo
Homerton University Hopsital, London, United Kingdom

Abstract

Introduction

The adoption of spinal anaesthesia in day surgery is relatively new. With the advent of ideal, short acting agents with predictable onset/offset times[1] (2% Prilocaine and 2- Chloroprocaine 1%), this no longer has to be the case. In light of COVID-19 and an increase in patient comorbidities in the day surgery unit (DSU), ambulatory spinals offer an alternative to GA. We conducted a service evaluation to identify and assess risks and added benefits. Traditionally reduced PONV, analgesia, patient engagement, environmental (reduced emissions), potentially cost and clinical satisfaction and patient choice, which plays a major part of the consent process and is a recommendation to offer both where clinically appropriate[2]

Objectives

Evaluate patient satisfaction

Reasons for failed discharge

Quantify complications

Identify areas for improvement evaluate efficiency and validity of same day discharge

Methods

Manual data collection of documented spinals cases. Inclusion criteria: Any operations in which a spinal anaesthetic was delivered in the DSU between 15th December 2020 - 1st April 2021. A retrospective structured patient survey via telephone based on BMJ article on day surgery spinal[1]. Data was analysed with a simple frequency analysis. Average recovery and day stay times were compared between GA and spinal groups.

Results

24 patients were identified with an 80% response rate. Average satisfaction score 8/10. None of the patients experienced delayed mobilization/PDPH or required readmission. Interestingly, 20% of respondents reported their main issue to be back pain from the site of entry which they were not warned about. Average recovery time and hospital stay were shorter for those who had spinals 38 minutes vs 43.4 minutes GA and 177.8 minutes vs 186 minutes GA respectively. 15% GA vs 8.6% spinal required overnight admission.

Conclusion

We identified areas for improvement:

Introducing spinals to patients at preassessment clinic,

Educating MDT - surgeons PAC nurses

Providing written information before and on the day of surgery

Electronic documentation for ongoing audits and medicolegal purposes.

Specifically mentioning soreness at needle entry site as a side effect. Spinal anaesthesia is now considered a safe alternative to GA and should be offered to patients where appropriate[1]. We have been able to implement this on our unit, audit the service and improve upon current practice.

Reference

1.Rattenberry W, Hertling A, Erskine R. Spinal anaesthesia for ambulatory surgery. *BJA Educ* [Internet] The Authors; 2019; **19**: 321–8

2.Watson B, Allen J, Smith I. SPINAL ANAESTHESIA Spinal Anaesthesia in Day Surgery. 2004; 1–17

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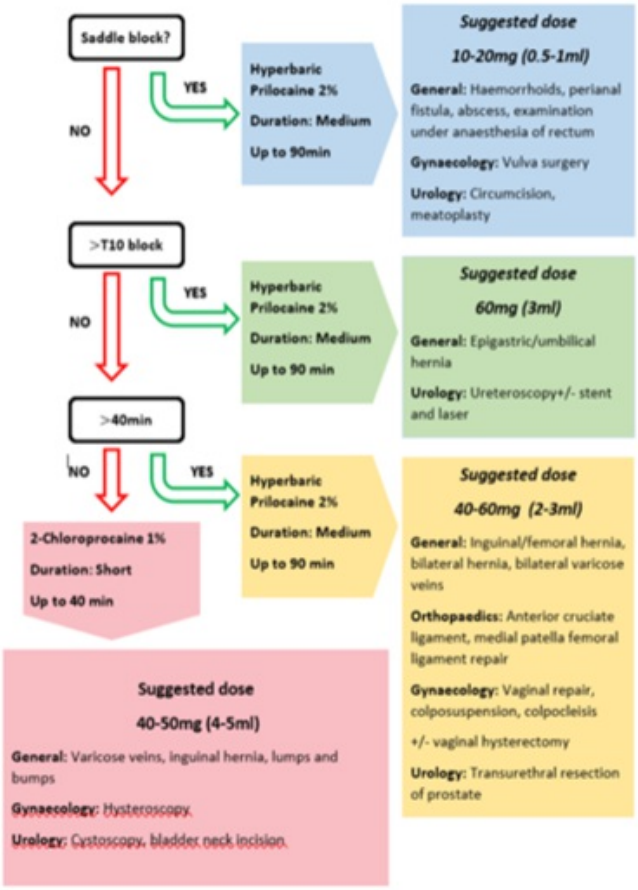

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Surgery	Recovery	Time til discharge	
Spinal	38 mins	177.8 mins	8.
GA	43.4 mins	186.6 mins	15
Overall	40.7mins	182 mins	12

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Poster keywords

Low Dose Spinal, Day Surgery, DGH

22

Improving iron infusion results with introduction of a new dosing protocol

Tristan Hawkins, Rhidian Jones, Anthony Funnell
Princess of Wales hospital, Bridgend, United Kingdom

Abstract

Introduction:

Patients undergoing major surgery who are anaemic have increased morbidity and mortality (1,2). An international consensus statement suggests a Hb >130 for those undergoing major surgery (3). Treatment of iron deficiency using intravenous iron, occurs as part of a pre-operative optimisation pathway alongside CPET in the Princess of Wales hospital. The vast majority are colorectal cancer patients requiring urgent surgery.

Prior to November 2020, iron dose was calculated by the Ganzoni formula: Total iron deficit = weight (kg) x (target - actual Hb) x 2.4 + iron stores (mg) (iron stores 500mg if >35kg). The Cardiff cardiac surgery anaemia pathway however uses a 20mg/kg dosing of IV iron. From Dec 2020, 20mg/kg (actual body weight) of iron was used, prescribed in 10kg intervals.

The aim was to identify whether the dose change for IV iron improved treatment response.

Methods:

Retrospective data collection from patients assessed in the high-risk surgery clinic, identified as anaemic and treated with IV Monofer®. Data collected from December 2018 to present.

Indication for IV iron was Hb <130, in combination with any of the following:

- Ferritin <30µg/L
- TSAT <20%
- CRP >5

Hb was recorded prior to iron infusion. The highest post-infusion Hb was identified in the following 4 months but prior to surgery. Exclusion criteria were no repeat Hb, repeat Hb following surgery, or repeat Hb <2 weeks post iron infusion, to assess true benefit.

Results:

The average Hb rise for all patients with 20mg/kg dosing was 20.8 compared to 8.4 when using the Ganzoni formula. The rise was even greater within the absolute iron deficiency sub-classification.

Conclusion

Accepting the limitations of a 37 vs 50 day average follow-up, there appears to be a much greater

response in Hb to 20mg/kg of IV iron than using the Ganzoni formula. This is especially true with respect to absolute iron deficiency, and could lead to reduced transfusions and improved outcomes in the perioperative period.

References

1. Baron et al., BJA, 113, 416-23, 2014
2. Evans et al., Anaesthesia, 76, 639-646, 2021
3. Munoz et al., Anaesthesia, 72, 233-247, 2017

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	Ganzo
	Number o patients
Absolute iron deficiency (ferritin <30µg/L)	
Absolute iron deficiency + inflammation (ferritin 30-100µg/L and TSAT <20% or CRP>5)	
Functional iron deficiency (ferritin >100µg/L and TSAT <20% or CRP>5)	
Total	

Table 1: Hb changes associated
additional sub-classification by ir

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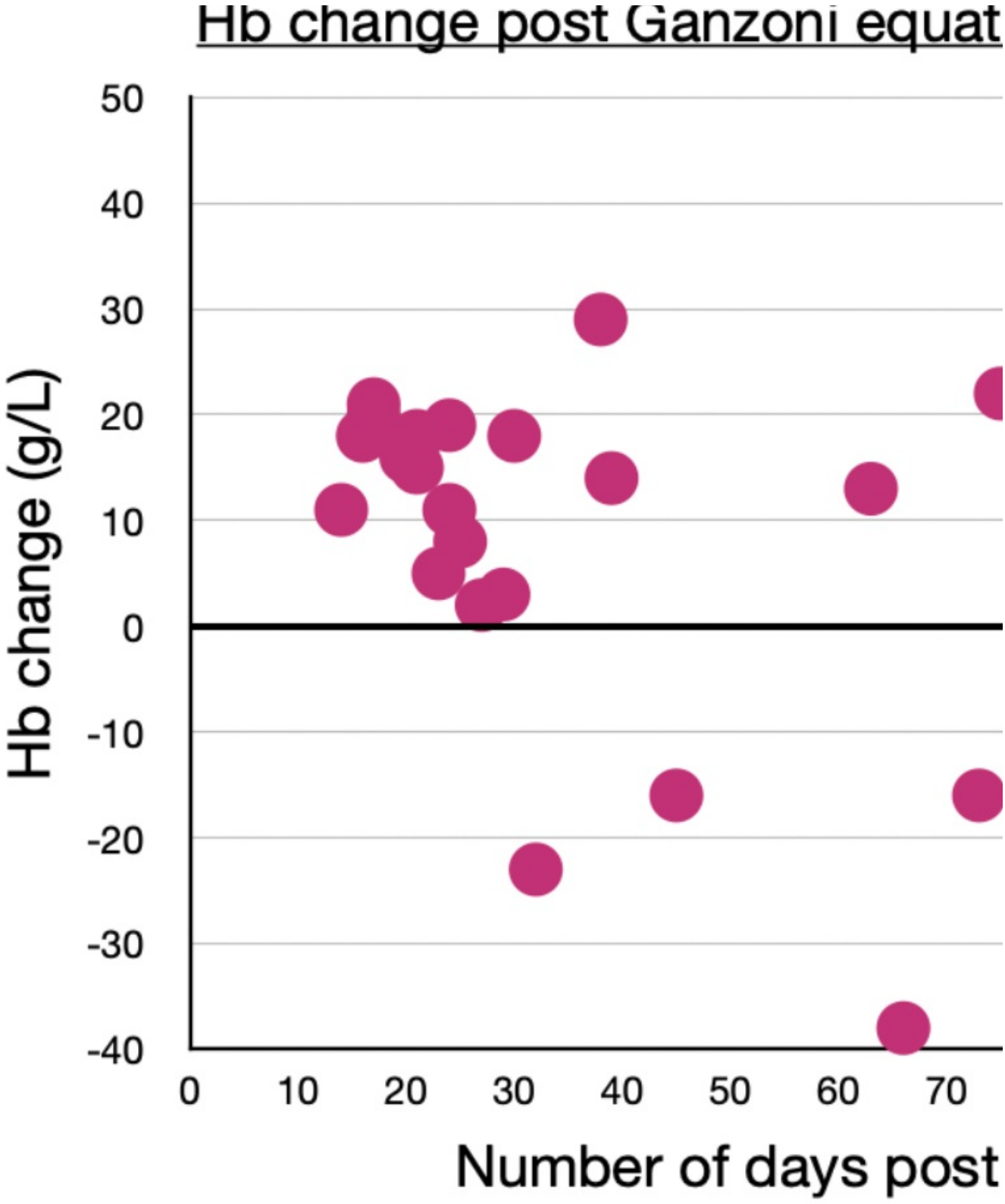

Figure 1: Hb changes post i

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Poster keywords

Iron, Anaemia, Colorectal, Perioperative

23

Pre-Op Assessment Form, Nuisance or Necessary? An Audit

Jenny Fitzgibbon, Parvaiz Hafeez
Cork University Hospital, Cork, Ireland

Abstract

Introduction:

The ultimate goals of preoperative assessment are to reduce the patient's surgical and anaesthetic perioperative morbidity or mortality, and to return them to desirable functioning as quickly as possible (1). Several large-scale epidemiological studies have indicated that inadequate preoperative preparation of the patient may be a major contributory factor to the primary causes of perioperative mortality (2). Most hospitals have a designated preoperative anaesthesia assessment form, which is to be completed pre-induction of anaesthesia. If not completed, patients may undergo procedures having not been medically optimised. This is particularly relevant to multi comorbid patients. This may also result in unanticipated difficulties during induction such as difficult airways. If the assigned anaesthetic assessment form is completed, unanticipated difficulties and, as such, adverse outcomes, could be prevented and patients optimised.

Methods:

Anaesthetic assessment form No. 64 at Cork University Hospital completion pre induction. Forms were included if the patient was undergoing a general anaesthetic, and not a local anaesthetic. Completion to include airway assessment, regular medications, past medical history, allergies, PONV history, history of difficult intubation, ASA score. Partial completion status achieved if some, but not all, of these were completed.

Standard: 100% completion rate

Criteria:
Assessment form completed pre-induction to any standard Y/N
Partially completed Y/N

Number of patients: 50

Results:

Rate of completion pre-induction of anaesthesia to any standard 35/48 (82%)

Rate of partial completion of form 17/35 (48%)

Conclusion:

The rates of pre-induction completion were high, but often they were partial completions. Between induction and moving the patient to recovery, the patients often had more information completed. The most commonly omitted information was the TMD, and mouth opening. As is well documented, TMD is a significant predictor in whether an intubation is likely to be difficult and should be assessed by an anaesthesiologist before induction. Overall, the rates of completion did not meet the 100% required standard but were still high. The rates of adequate completion were low, but the majority of patients

were assessed by an anaesthesiologist prior to their induction.

Reasons for non-completion were time constraints, and confidence of staff that they would be able to manage difficult airways even if they did arise.

References:

1- Zambouri, A. “Preoperative evaluation and preparation for anesthesia and surgery.” *Hippokratia* vol. 11,1 (2007): 13-21.

2- Conway JB, Goldberg J, Chung F. Preadmission anaesthesia consultation clinic. Can J Anaesth. 1992 Dec;39(10):1051-7. doi: 10.1007/BF03008374. PMID: 1464132.

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Poster keywords

Assessment, Perioperative Medicine, Pre-Operative, Difficulties, Audit

24

Dynamic blood oxygen indices in mechanically ventilated COVID-19 patients with acute hypoxic respiratory failure: a cohort study

Luke Bracegirdle[1], Alexander Jackson[1,2], Ryan Beecham[1], Maria Burova[1], Clare Morden[1], Laura Hamilton[1], Darshni Pandya[1], Michael Grocott[1,2,3], Andrew Cumpstey[1,2,3], Alilanandan Dushianthan[1,2,3]

[1]General Intensive Care Unit, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom. [2]NIHR Clinical Research Facility and NIHR Biomedical Research Centre, University Hospital Southampton, Southampton, United Kingdom. [3]Integrative Physiology and Critical Illness Group, Clinical and Experimental Sciences Faculty of Medicine, University of Southampton, Southampton, United Kingdom

Abstract

Introduction

Acute hypoxic respiratory failure is a hallmark of severe COVID-19 pneumonia and often requires supplementary oxygen therapy.[1] Critically ill COVID-19 patients may require invasive mechanical ventilation, which carries significant morbidity and mortality.[2] Understanding of the relationship between dynamic changes in blood oxygen indices and clinical variables is lacking. We evaluated the changes in blood oxygen indices – partial pressure of oxygen in arterial blood (PaO_2), PaO_2/fraction of inspired oxygen (FiO_2) ratio, oxygen content (CaO_2) and oxygen extraction ratio (O_2ER) - in COVID-19 patients through the first 30-days of intensive care unit (ICU) admission and explored relationships with clinical outcomes.

Methods

We performed a retrospective observational cohort study of all adult COVID-19 patients in a single institution (ethics through REACT COVID-19[3]) requiring invasive mechanical ventilation between March 2020 and March 2021. We collected baseline characteristics, clinical outcomes and blood oxygen indices. 50,505 blood gas data points were obtained from 184 patients over 30-days.

Results

184 patients met inclusion criteria, providing 34,592 arterial blood gas data points over 30-days. Patient characteristics and outcomes are presented in Table 2. The median age was 59.5 (IQR 51, 67), and median BMI 30 (IQR 25.8, 35.5). The majority were men (62.5%) of white ethnicity (70.1%). Median mechanical ventilation duration was 15-days (IQR 8, 25) and 133 patients (72.3%) survived 30-days. Oxygen indices are presented in Table 1. Non-survivors exhibited lower oxygen extraction; there was an averaged mean difference in O_2ER of -0.06 (95% CI -0.09, -0.03) across days one to seven and -0.09 (95% CI -0.10, -0.07) across days one to 30. While both survivors and non-survivors had sub-physiological CaO_2 (which trended down throughout their ICU admission), non-survivors tended to exhibit higher values; there is an averaged mean difference of 0.23 (95% CI 0.13, 0.34) across day one to day seven and 0.28 (95% CI 0.21, 0.35) across days one to 30.

Conclusion

The COVID-19 pandemic offers a unique opportunity to study a homogenous cohort of hypoxic critically unwell patients, with similar underlying pathology. In a cohort of mechanically ventilated adult ICU patients with hypoxic respiratory failure due to COVID-19, oxygen extraction is significantly lower in non-survivors compared to survivors during the first 30 days of ICU admission, despite having higher CaO_2 values. This suggests COVID-19 may cause impaired oxygen utilisation. Urgent further evaluation of the relationship between mitochondrial function and survival in COVID-19 is justified.

References

1. COVID-19-associated acute hypoxaemic respiratory failure: experience from a single centre. *British Journal of Anaesthesia*, Elsevier; 2020; 125(4): e368-e371

2. ICNARC. ICNARC report on COVID-19 in critical care: England, Wales and Northern Ireland [Internet]. Intensive care national audit & research centre; 2021 Jun Available from: https://www.icnarc.org/OurAudit/Audits/Cmp/Reports

3. Burke H, Freeman A, Dushianthan A, et al. Research Evaluation Alongside Clinical Treatment in COVID-19 (REACT COVID-19): an observational and biobanking study. *BMJ Open* 2021; **11**: e043012

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Poster keywords

COVID-19, Oxygen, Hypoxia, Intensive Care, Oxygen extraction

25

Maintaining surgical services for non-COVID patients in a COVID dedicated hospital- a successful quality improvement project from central Sri Lanka

Ashani Ratnayake, Kosala Somaratne, Ayeshani Rajapakse
Base Hospital, Teldeniya, Sri Lanka

Abstract

Introduction

The pandemic due to SARS-CoV-2 viral infection has created a backlog for routine surgeries all over the world.(1) Sri Lanka also had about 350,000 case by mid-August 2021.(2) Excessive workload in the healthcare led to limited service for surgical patients. Many institutes have laid different plans to continue surgical services with variable success. (3) Base Hospital-Teldeniya used to be a 240 bedded hospital providing care for 1 million population. The draining area for the hospital was consisted of geographically challenging areas which made travelling to the hospital difficult, in some cases taking as much as 3 ½ hours to reach the hospital from hilly peripheries. With the beginning of the pandemic the hospital was converted to a full time COVID treatment centre along with ICU facilities. The outpatient clinics were continued, and surgical patients were referred to National Hospital Kandy which is about further 24km away.

Method

Plans were made to provide space for pre-admissions and management of post-operative patients. 10 bedded area with monitoring facilities were prepared. The staff was mobilised on rotational basis allocating 3 days for surgeries. Both cancer and non -cancer surgeries were included and the cancer cases were prioritised.

Major and intermediate cases were admitted on the day before after a rapid antigen testing and minor surgeries were admitted on the same day. They also had to undergo a rapid antigen testing. The minor and most of the intermediate cases were discharged on the same day or the next day and the major cases were kept longer.

Results

The project was started at the beginning of the month of May, 2021. Each week, 1-2 major surgeries were planned along with intermediate and minor surgeries. The number of surgeries were slowly increased over the time. The figure 1 and 2 show number of surgeries done each month in year 2020 and 2021 respectively along with number of COVID-19 admissions. During the first wave (May-Jul, 2020) and second wave (Oct, 2020- Feb, 2021) the surgical cases hit the zero. Yet during the more difficult 3rd wave we could maintain the essential surgical services in a slowly increasing trend as a result of this new project.

Conclusion

Maintaining surgical services for the population is important in the time of pandemic as they are likely to suffer from killer surgical illnesses like cancers more than the SARS-CoV-2 infection. With this project we were able to maintain the essential surgical services in the difficult hilly terrain of the central Sri Lanka. Although the project is successful in an increasing trend at the moment, frequent assessment and planning is necessary to sustain the service in the face of ever changing dynamics of the difficult Covid-19 pandemic.

References

1. Uimonen M, Kuitunen I, Paloneva J, Launonen AP, Ponkilainen V, et al. (2021) The impact of the COVID-19 pandemic on waiting times for elective surgery patients: A multicenter study. PLOS ONE 16(7): e0253875. https://doi.org/10.1371/journal.pone.0253875

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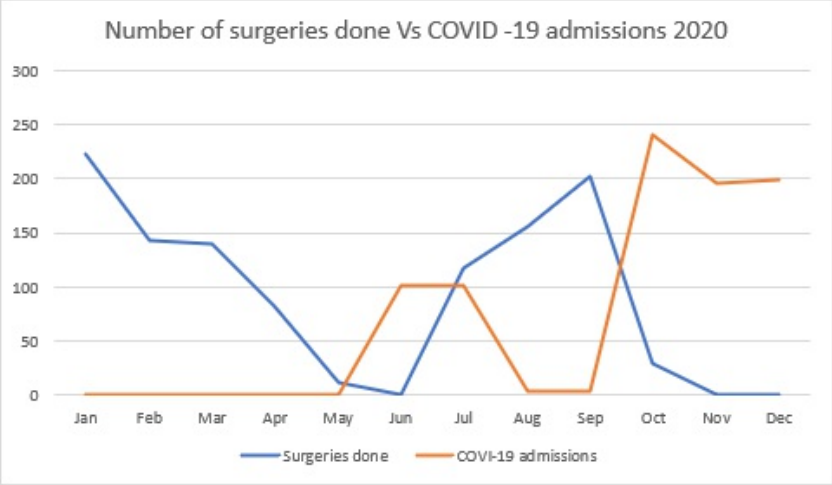

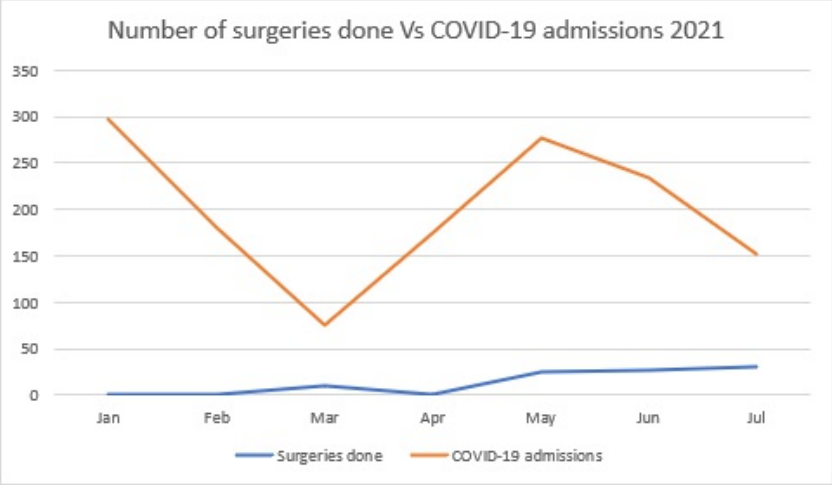

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Poster keywords

COVID-19, Surgical services

26

Which CPET variable is the most significant predictor of post operative outcomes in colorectal patients undergoing major intra-abdominal surgery in the Princess of Wales Hospital Bridgend.

Teifi Tomos Drew[1], Rhidian Jones[2], Anthony Funnell[2]

[1]Cardiff University Medical School, Cardiff, United Kingdom. [2]Princess of Wales Anaesthetic Department, Bridgend, United Kingdom

Abstract

Introduction: A study looking at the efficacy of cardiopulmonary exercise testing (CPET) as a predictor of postoperative outcomes in colorectal patients undergoing major intraabdominal surgery.

Methods: Retrospective analysis of colorectal patients at Bridgend hospital who underwent CPET prior to major intra-abdominal surgery (Feb 2019 - Feb 2020). Variables such as a low anaerobic threshold (<11.0), low peak VO2 (<15), and a high VE/VCO_2 ratio (>34) were compared against the length of postoperative admission and morbidity. Prolonged post-surgical admission was defined as that >7 days and postoperative morbidity was considered binary (Yes or No). Univariate and multivariate analyses were performed, using odds ratios and confidence intervals, to discern any correlation between CPET variables and postoperative outcomes. The patient's 30-day mortality risk scores were calculated using the Carlisle risk calculator and compared against postoperative destination to see if local guidelines are being adhered to. The guidelines suggest that patients with a mortality risk of >1% should be admitted to ITU postoperatively.

Results: 101 patients were included, of which 61% were male. Rectal cancer was the most common cancer affecting under 1/3 of patients and a hemicolectomy was the most common operation. Over 25% of patients had a post-operative destination different from that outlined in local guidelines. The mean AT, VO2peak, and VE/VCO2 for the cohort was 11.40, 18.83, and 35.01 respectively. Patients with a predicted mortality rate of >1% spent an additional day in the hospital compared to those with a mortality rate of <1%. A low VO_{2peak} was the strongest CPET predictor of a long hospital admission however, this result lacked significance (OR 1.58 95%CI (0.61 - 4.05)). Patients with a predicted 30-day mortality risk of >4% were 3.6 x more likely to experience a post-operative complication compared to patients with a risk of <1% (95% CI 1.04 - 12.87). Low AT and high VE/VCO_2 were strong predictors of postoperative complications (OR 1.82 and1.67). In our multivariate analysis patients with a high VE/VCO_2, low AT, low VO_{2peak}, and a high % predicted mortality were 2.24 times more likely to have a post-operative complication.

Conclusion: Colorectal patients presenting to the Princess of Wales hospital for CPET testing prior to surgery are generally unfit. Our study found that cardiopulmonary fitness is an independent predictor of morbidity but not length of hospital stay. Local guidelines regarding appropriate post-operative destinations based on pre-assessed mortality rates are not being adhered to. Further research is required to strengthen associations between individual CPET variables and postoperative outcomes.

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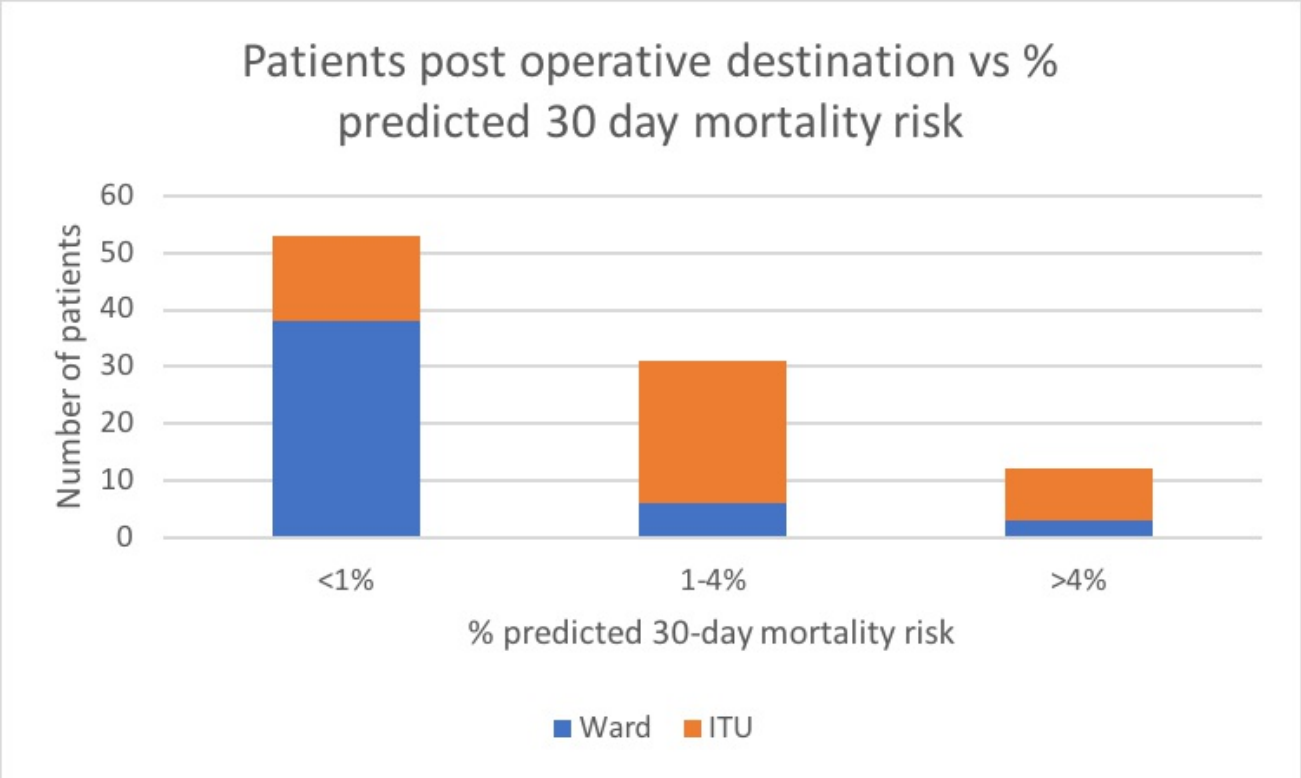

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Univariate and multivariate analysis of CPET variables against post-operative complication rates		
CPET Parameter	**Odds ratio**	**95% CI**
AT <11 (ml/kg/min)	1.82	0.78 – 4.24
VO2peak <15 (ml/kg/min)	1.33	0.51 – 3.50
VEVCO2 >34	1.67	0.72 - 3.85
30 – day mortality rate >1%	1.35	0.59 – 3.15
30-day mortality rate >4%	3.67	1.04 - 12.87
AT <11 + VO2peak <15	1.74	0.58 – 5.24
AT <11 + VEVCO2 >34	1.84	0.68 – 5.01
AT <11 + 30-day mortality rate >1%	1.99	0.01 – 169.306
VO2peak <15 + VEVCO2 >34	1.82	0.61 – 5.46
VO2peak <15 + 30-day mortality rate >1%	2.06	0.65 - 6.50
VO2peak <15 + AT <11 + VEVCO2 >34	2.09	0.62 – 7.04
VEVCO2 >34 + AT <11 + VO2peak <15 + mort >1%	2.24	0.56 – 9.02
Univariate and multivariate analysis of CPET variables against length of hospital stay >7 days		
Parameter	**Odds ratio**	**95% CI (Lower – Upper)**
AT <11 (ml/kg/min)	1.09	(0.49 - 2.45)
VO2peak <15 (ml/kg/min)	1.58	(0.61 - 4.05)
VEVCO2 >34 (ml/kg/min)	1.00	(0.55 - 2.78)
30-day mortality rate >1%	1.03	0.46– 2.30)
30-day mortality rate >4%	0.73	
AT <11 + VO2peak <15	1.53	(0.53 - 4.39)
AT <11 + VEVCO2 >34	1.21	(0.45 - 3.25)
AT <11 + 30-day mortality rate >1%	1.06	(0.62 – 1.82)
VO2peak <15 + VEVCO2 >34	1.32	(0.003 – 503.01)
VO2peak <15 + 30-day mortality rate >1%	1.05	(0.34 – 3.27)
VO2peak <15 + AT <11 + VEVCO2 >34	0.94	(0.28 – 3.13)
VEVCO2 <34 + AT <11 + VO2peak <15 + mort >1%	0.68	(0.17 - 2.72)

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Poster keywords

Perioperative , Colorectal , CPET, Bridgend

27

Managing frailty in the High Risk Anaesthetic clinic

Natalie Clark, Sonya McKinlay, Christina Ryan, Kirsty Colquhoun
Glasgow Royal Infirmary, Glasgow, United Kingdom

Abstract

Introduction

The aging population means patients are becoming increasingly frail and multimorbid. The HRA (High Risk Anaesthetic) clinic in Glasgow Royal Infirmary conducts functional assessments of patients deemed to be high risk for surgery. Frailty is assessed using a modified Fried frailty phenotype[1] and a score out of 5 is calculated (0=not frail, 1-2=pre-frail and >3=frail). There is no Geriatrician input into the clinic so we aimed to assess what proportion of our patients would be eligible to receive Geriatrician input/CGA preoperatively based on frailty scoring.

Method

In March-April 2021 we undertook a review of the electronic patient records for all patients seen during 2020. Data extracted included age, frailty phenotype, diagnosis, type of surgery, whether surgery was performed and whether any Geriatric input occurred perioperatively.

Results

In total 117 patient notes were reviewed.

Table 1. Number of patients by age and frailty phenotype scores.

	>65yrs	**<65yrs**
Total no.	73 (62%)	44 (38%)
Frailty phenotype 0	23 (31%)	10 (22%)
Frailty phenotype 1-2	24 (33%)	17 (39%)
Frailty phenotype >3	26 (36%)	17 (39%)

By the time of data collection, 39/117 patients had undergone surgery of which seven (18%) had a frailty score of $\geq$3. The majority of patients (22/39, 56%) were classed as pre-frail (score 1-2).

In the over 65 group 15 patients (30%) who were pre-frail or frail (score $\geq$1) had at least one episode of contact with a Geriatrician. Twelve (31.6%) of the pre-frail or frail cancer patients were seen in the specialist cancer hospital onco-geriatric clinic perioperatively.

Conclusion

The HRA clinic sees a significant number of patients who meet frailty criteria. Few patients are being seen by the Geriatric service. Enhancing referral pathways will ensure best ongoing care for these patients, regardless of whether they undergo surgery.

Over a third of our patients scoring $\geq$1 on the frailty phenotype are under 65. No local services exist to target this section of the surgical population. This is a potential area for development.

This data is supporting the case for funding specialist elderly surgical care nurses to perform frailty screening at diagnosis in the surgical outpatient clinic, and referral for CGA and specialist Onco-Geriatric care.

References

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Table 1. Number of patients by age and frailty phenotype scores.

	>65yrs	<65yrs
Total no.	73 (62%)	44 (38%)
Frailty phenotype 0	23 (31%)	10 (22%)
Frailty phenotype 1-2	24 (33%)	17 (39%)
Frailty phenotype >3	26 (36%)	17 (39%)

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Poster keywords

Frailty, High risk, Perioperative, Clinic, Assessment

28

Improving Perioperative Anaesthetic Practice in Hip Fracture Patients at New Cross Hospital

Jason Patel[1], Manpreet Singh[1], Bharati Rajdev[2], Prabakar Dharmeswaran[1]
[1]New Cross Hospital, Wolverhampton, United Kingdom. [2]City and Sandwell Hopitals, Birmingham, United Kingdom

Abstract

Introduction: Elderly patients with hip fractures are at risk of significant morbidity and mortality. AAGBI[1] and NICE[2] have produced guidance for perioperative care to help improve outcomes in these patients.

We audited the perioperative anaesthetic practice of hip fracture management in our DGH and suggested improvement with the introduction of a pathway.

Methods: We audited the practice of anaesthetic management of hip fracture patients against national standards in our DGH. We collected the data of 100 patients in 2019.

Results: Almost all cases were anaesthetised by consultants, with more than half done under GA (54%). Mode of induction of anaesthesia was intravenous in most of cases (87%). Less than half of patients (44%) had a neuraxial block, with the dose of bupivacaine more than 10mg in most of the cases (86%) and 70% had intrathecal diamorphine as an adjunct. 35% of patients had a nerve block. Drugs used for sedation were variable. 75% of our patients had an episode of hypotension, with 62% cases having a >30% fall in SBP.

Conclusion: Standardised and adequate perioperative management of frail elderly patients with hip fractures is pivotal in reducing mortality. AAGBI[1]guidance recommended neuraxial block in all cases, if possible, with a consideration of less than 10mg bupivacaine and restriction of intrathecal opioids to fentanyl. Further recommendations from Anaesthetic sprint audit of practice[3] include the use of standardised approaches and peri-operative consideration of nerve blocks.

We found variation in terms of spinal anaesthetic, nerve blocks and sedation in our audit. We also noticed that GA was the main mode of anaesthetic, and the incidence of hypotension was quite significant.

To avoid variation, we created an anaesthetic proforma for perioperative management in hip fracture cases, which is now awaiting implementation following the covid pandemic.

References:

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2. NICE. The management of hip fractures in adults. 2011.
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HIP FRACTURE PERIOPERATIVE CA

Preop

NHFS score

Variable	Points
Age 66–85 years	3
Age 86 ≥ older	4
Male	1
Haemoglobin concentration ≤ 10 $g.dl^{-1}$ on admission to hospital	1
Abbreviated mental test score ≤ 6/10 on admission to hospital	1
Living in an institution	1
More than one co-morbidity	1
Active malignancy within last 20 years	1

Resuscitation status

For CPR

DNA CPR

Intraop

GA or SA
If Spinal Anaesthetic
Aim for Bupivacaine <10 mg
Opiates in spinal if used–Fentanyl
Avoid Ketamine for sedation
Supplemental Oxygen
Consider Arterial canula/vasopressor infusion
Peripheral Nerve block in all patients-Consider adding Lignocaine. Consider high volumes of Local anaesthetic mix(upto 40 mls) Fascia Illiaca block

Postop

Consider Checking Hb by Hemocue in recovery

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Poster keywords

hip, fracture, perioperative, mortality, anaesthetic

29

Factors Affecting Inpatient Sleep on the Acute Medical Unit

Berenice Cunningham-Walker
Gloucestershire Trust, Gloucester, United Kingdom

Abstract

Introduction

Sufficient sleep in the unwell patient has long been cited as essential for a quality hospital admission, with sleep deprivation being assumed to have serious negative impacts on health and wellbeing. A variety of factors are attributed to decreased quality and quantity of sleep for inpatients, with environmental factors including medical interventions, noise and light, and non-environmental factors including acute illness and medications (1). By utilising research into which modifiable factors are associated with poor quality of sleep, hospitals are better able to support inpatient sleep; this has ultimately led to more sleep for patients (2). The objective of this study on the Acute Medical Unit (AMU) in a District General Hospital was to analyse factors associated with poor inpatient sleep and to identify modifiable factors with the aim to improve inpatient sleep with interventions on the AMU.

Methods

On AMU at Gloucester Royal Hospital sleep surveys were handed out to inpatients asking them to rate their sleep quality at home compared to their sleep quality the night before on AMU; this was a quantitative rating on a scale of 1 (poor sleep) to 10 (excellent sleep). The cohort were encouraged to list any causes of sleep disturbance and how their sleep might be improved on AMU.

Results

Sleep quality at home had a median rating of 7 out of 10, compared with 4 out of 10 on AMU. Of the 43 patients in total eligible for the study, 77% reported the quality of their sleep was worse in AMU than at home.

56% of patients cited noise as a cause for their sleep disturbance with the next most common factor being light (12%). They also noted that other patients, pain and medical interventions being carried out through the night were factors which negatively affected their sleep quality.

Conclusions

The two commonest factors recognised by patients as negatively affecting their sleep in AMU were noise and light. Based on the study, liaison with Cheltenham and Gloucester Hospitals Charity has enabled purchase of “Sleep Care Kits” for AMU, comprising eye masks and ear plugs. Following implementation of the care kit alongside visual aids to promote good sleep hygiene, it will be valuable to review factors associated with inpatient sleep quality.

References

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2. DuBose, J. and Hadi, K., 2016. *International Journal for Quality in Health Care*, 28(5), pp.540-553.

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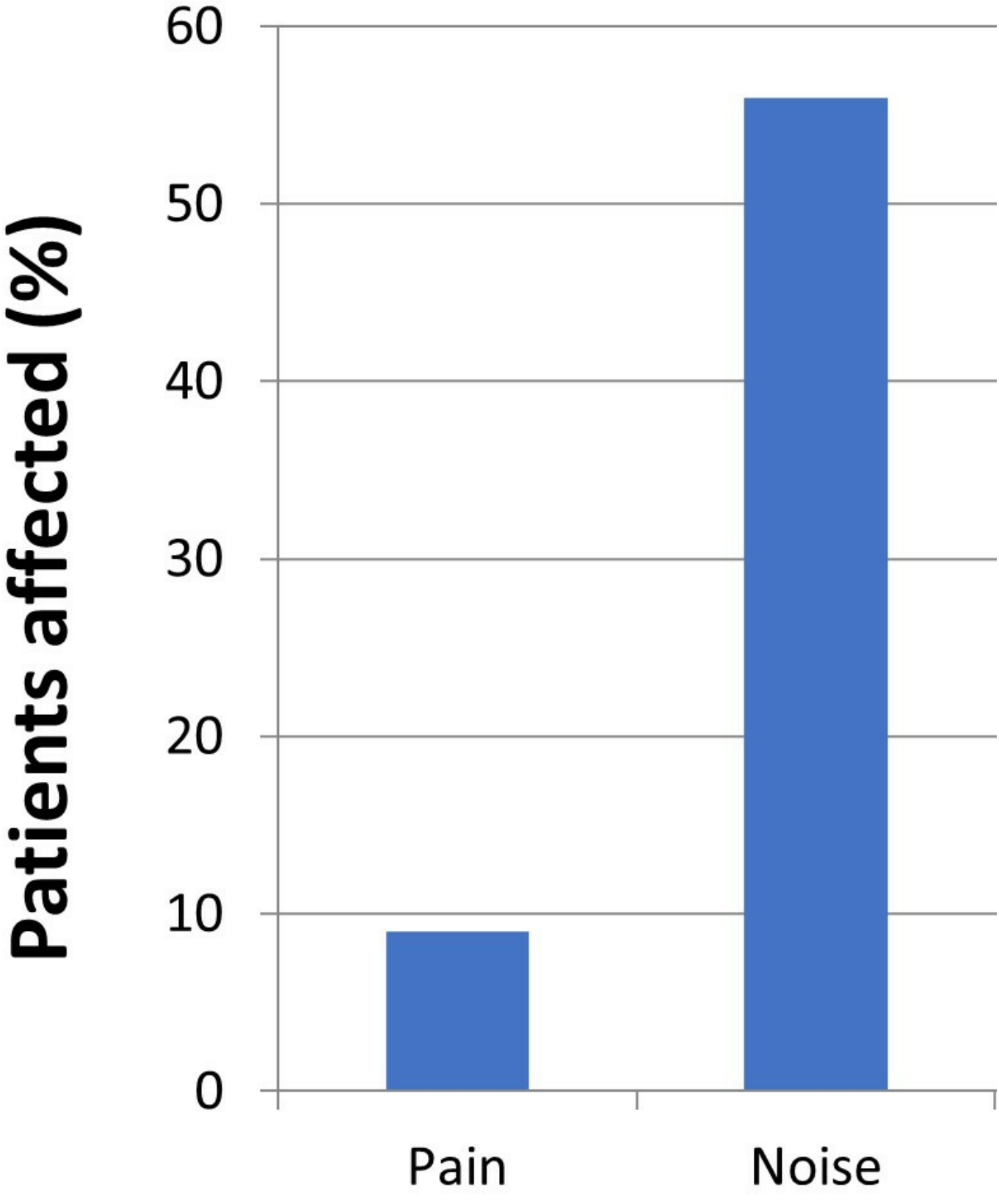

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Poster keywords

Inpatient sleep, Sleep quality, Acute Medical Unit, Environmental factors, Factors affecting sleep

30

Six weeks of preoperative high intensity interval training results in alteration of metabolic substrate use in elderly patients scheduled to undergo major abdominal surgery

John Whittle[1], Zachary Healy[2], Jeroen Molinger[2], Julie Thacker[2], Brant Inman[2], David MacLeod[2]
[1]UCL, London, United Kingdom. [2]Duke University, Durham, USA

Abstract

Introduction:

Preoperative aerobic fitness is predictive of the development of postoperative complications after major abdominal surgery. Aerobic exercise capacity is ultimately dependent on both mitochondrial function and efficiency of substrate usage (1). Deconditioned individuals use proportionally more carbohydrate and less lipid as metabolic fuels both at rest and during exercise when compared with conditioned individuals (2). High intensity interval training (HIIT) has been demonstrated to improve aerobic fitness in surgical patients. HIIT has also been shown to increase lipid oxidation and decrease total carbohydrate utilization during exercise in young, healthy individuals, which is associated with improved physical performance. Improved metabolic flexibility may underlie some of the benefits of increased aerobic fitness in surgical patients in terms of resilience to surgical trauma. It is unknown whether a short period of HIIT can result in similar changes in older surgical oncology patients. We hypothesized that six weeks of HIIT would result in beneficial alterations in the metabolic profile in this population.

Methods:

10 patients aged >65 with abdominal malignancies scheduled for surgery undertook a 6-week, 3 days per week, HIIT program calibrated to baseline aerobic exercise capacity. We calculated (i) indirect calorimetry derived (Frayn) substrate oxidation rates at rest and (ii) during Cardiopulmonary Exercise Testing (CPET) and (iii) mitochondrial respirometry in peripheral blood mononuclear cells (PBMCs) using SeahorseXFe96 to assess substrate utilization pre- and post- intervention. Data were assessed for normality using the Shapiro-Wilk test and subsequently presented as mean(sd) or frequency(%), as appropriate. Significance was set at $p<0.05$ and all analyses were performed using GraphPad Prism (Version 9.2.0).

Results:

VO2 peak increased after 6-weeks of HIIT (12.4 ± 2.5 vs. 15.1 ± 4.8 ml/kg/min, $p=0.003$). Lipid oxidation as a proportion of total substrate utilization at rest (43% ± 15.9 vs. 59% ± 14, $p=0.05$) and during exercise (Fig.1) increased after the intervention. Similarly, basal mitochondrial PBMC beta-fatty acid oxidation-dependent ATP production (%) increased (20 vs. 35, SE of difference ±3%, $p=0.01$) with reciprocal changes in non-beta-fatty acid oxidation dependent; this was also associated with a significant reduction in the glycolytic capacity of PBMCs($p= <0.05$).

Conclusion: Six weeks of HIIT produced a significant improvement in aerobic exercise capacity as well as changes in resting and dynamic lipid utilization at rest and during exercise (CPET) with reciprocal basal changes in circulating PBMCs (mitochondrial respirometry) in a pilot population of older surgical patients. These changes may be relevant to improving resilience to surgical stress and should prompt further prospective investigation.

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2. San-Millán I, Brooks GA. Assessment of Metabolic Flexibility by Means of Measuring Blood Lactate, Fat, and Carbohydrate Oxidation Responses to Exercise in Professional Endurance Athletes and Less-Fit Individuals. Sport Med. 2018;

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Variable	All	Pre-Training	Post-Training	p value
Age, years (range)	71 (65-81)			
BMI, kg/m^2 (range)	29.5 (24.03-30.60)			
Gender:				
Male (%)	65			
CPET variables (mean, sd):				
Peak VO_2 (mls/kg/min)		12.5 (2.1)	14.9 (1.3)	0.003
Anaerobic Threshold (mls/kg/min)		9.8 (1.9)	11.7 (2.5)	0.01
Metabolic Cart Variables:				
Resting Metabolic rate (kCal/h, s.d)				
Resting Lipid Oxidation (%, s.d)		43 (23)	59 (14)	0.03
Resting Carbohydrate Oxidation (%, s.d)		56.9 (23)	40.8 (14)	0.03
Mitochondrial Respirometry variables:	SE of difference in mean			
Beta fatty acid oxidation dependent ATP production (% total)	4	20	35	0.03
Non beta fatty acid oxidation dependent ATP production (% total)	0.01	64	48	<0.01

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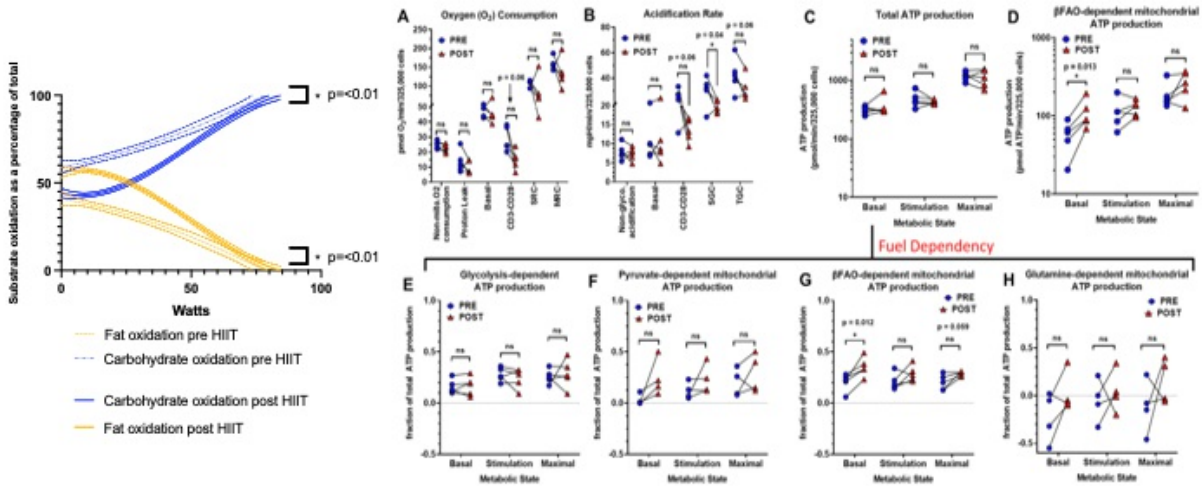

Figure 1: Metabolic Cross derived from metabolic cart data during Cardiopulmonary Exercise Testing (CPET) pre and post 6 weeks of High Intensity Interval Training (HIIT) in 10 patients aged >65 with abdominal malignancies. Data are presented as cubic regression (sd). P-values are for pre to post HIIT comparisons for each condition. (A-B) Paired Oxygen Consumption (A) and Acidification Rates (B) for PBMCs obtained from subjects pre- (blue) and post-HIIT obtained at during specified metabolic states during cellular respiration experiments (Agilent Seahorse). (C-D) Total (C) and beta-fatty acid oxidation-dependent (D) ATP production. (E-F). Quantification of fuel dependency, measured as the fraction of ATP production dependent on the fuel source using metabolic inhibitors specific for those pathways: (E) glycolysis (2-DG); (F) pyruvate utilization (UK5099; also involved in beta-fatty acid oxidation as additional substrate); (G) beta-fatty acid oxidation (Etomoxir); and (H) glutaminolysis (BPTES).

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Poster keywords

aerobic fitness, metabolic, CPET, abdominal surgery, interval training

31

The Pericapsular Nerve Group (PENG) block: A Cadaveric Evaluation of a 30 cc Injection

Jeffrey Gonzales[1], Jeff Gadsden[2], Maggie Holtz[3], Gary Schwartz[4], Richard Teames[5], Stan Dysart[6]
[1]Enhanced Recovery Anesthesia Consultants, Parker, USA. [2]Duke University, Durham, USA. [3]Georgia Anesthesiologists, P.C., Marrietta, USA. [4]Maimonides Med. Center, Brooklyn, USA. [5]JPS Hospital, Ft Worth, USA. [6]Parsippany, New Jersy, USA

Abstract

INTRODUCTION:

The PENG block has been described as a true “pericapsular” block that captures the articular branches of femoral, obturator and accessory obturator nerves[1]. We evaluated a 30 cc ultrasound-guided cadaveric PENG injection, the spread under fluoroscopy and fresh cadaveric dissection to determine if there was similar bursal space spread as in other cadaveric studies that used smaller volumes[1], and determine if a larger volume may effect spread to the femoral and/or lateral femoral cutaneous nerve (LFCN) when the needle was placed posterior/lateral to the poses tendon.

METHODS:

In a single cadaveric specimen, a 30 cc injection was completed on the left side.

The u/s guided needle placement was a trans-sartorial, anterior/lateral to posterior/medial approach, where the needle tip was positioned posterior-lateral to the psoas tendon.

Needle placement under U/S was confirmed by an experienced group of regional anesthesiologists, using a curvilinear, C2-5 ultrasound probe (fig1).

Live fluoroscopy was utilized to evaluate initial spread and the spread over time.

Cadaveric dissection was used to evaluate location of injectate (methylene blue/radiopaque dye). Cadaveric dissection consisted of the hip capsule, iliopsoas muscles, LFCN, femoral nerve and the psoas tendon.

RESULTS:

With the needle tip positioned directly posterior/lateral, a 30 cc fluoroscopic evaluation showed that spread occurred medial and superiorly along the outline of the ilium and distally over the femoral head (FIG 2).

Cadaveric dissection revealed no femoral nerve or LFCN staining (FIG3). This volume resulted in extensive staining poster to the iliac muscle and cephalad within the iliac fossa. This evaluation demonstrated spread distally along the psoas tendon but without proximal spread along the psoas

muscle and staining of the femoral and obturator articular nerve branches was appreciated.

CONCLUSION:

In this cadaveric evaluation of the PENG block there was no staining of the femoral or LFCN with a volumes of 30cc.

This volume demonstrated spread along the iliac fossa posterior to the iliac muscle without staining proximally along the psoas muscle similar to previous evaluations.

Staining of the hip capsule and the femoral and obturator articular nerve branches was appreciated.

Further clinical studies needle to be completed to compare appropriate volumes to produce analgesia but it appears, that a larger volume (30cc) did not affect the femoral nerve with needle placement as described.

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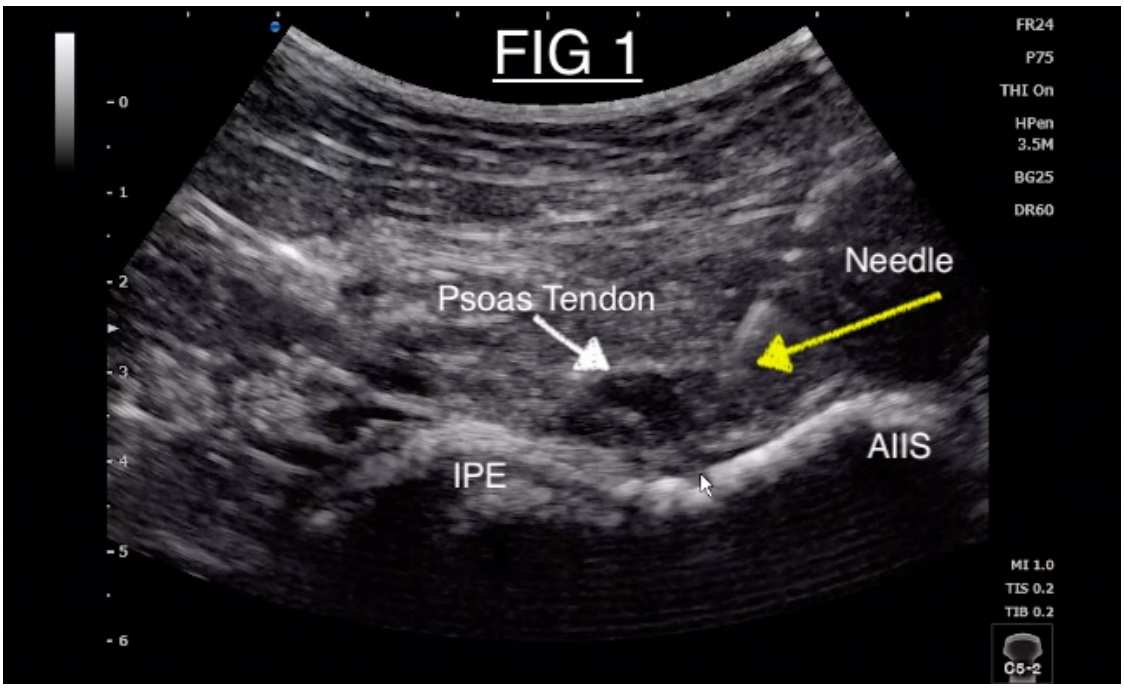

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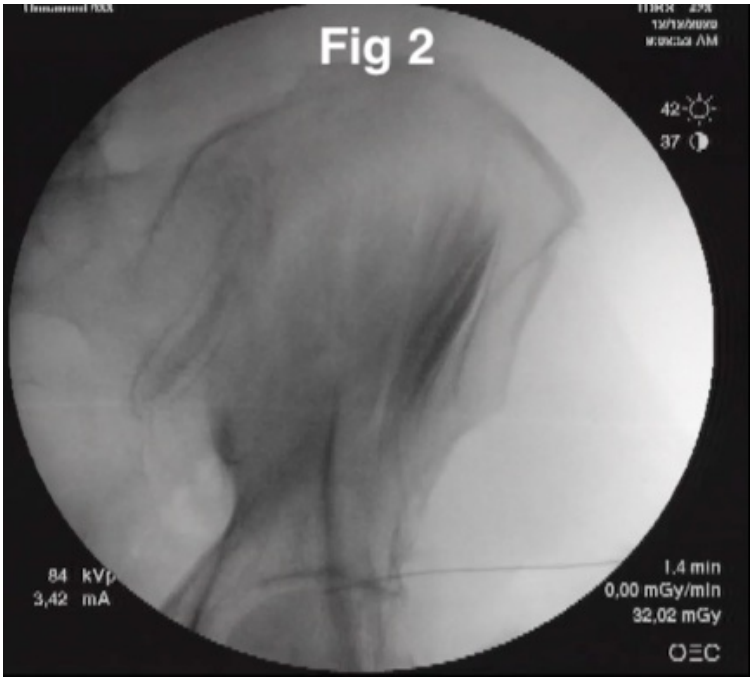

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Poster keywords

PENG, HIP ANALGESIA, PERICAPSULAR, Nerve block, cadaver

33

Evaluating the relationship between self-reported measures of preoperative patient functional capacity and ability to climb a flight of stairs

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Abstract

Introduction:

A patient's self-reported stair climbing capacity is commonly used by anaesthetists to assess preoperative functional capacity [1]. However, self-reported ability to climb a flight of stairs (FOS) as a yes / no response may have limitations in terms of its accuracy and sensitivity. It is possible that this might be improved by using categories of FOS climbing. Therefore, the aim of this pilot study was to assess how accurately people self-reported their ability to climb a FOS compared to their actual performance.

Methods:

Patients were recruited at Wollongong Hospital. Functional capacity was calculated as self-reported METS from the Duke Activity Status Index Questionnaire (DASI). Patients categorised their ability to climb a FOS on a scale (easy/moderately-easy/moderately-hard/hard). Patients were then asked to physically climb a FOS at their own comfortable pace whilst being timed. Upon completion, patients rated their physical exertion using a BORG Scale. Data was analysed based on self-reported stair-climbing ability to assess for differences in DASI scores, BORG responses and stair time. The 'Hard' self-reported category was excluded due to only one patient. Results were adjusted to account for differences due to age, weight, and BMI.

Results:

Thirty-three males (age 21-85 y, weight 87.1±17.3 kg, BMI 28.2±5.0 kg/m2) and twenty-four females (age 19- 89y, weight 85.2±25.6 kg, BMI 31.7±8.6 kg/m2) volunteered to participate in the study (N=57).
Patients reporting 'easy' or 'moderately-easy' on climbing a FOS had higher self-reported METS compared to patients reporting 'moderately-hard' (2.2 [0.7-3.6]) and (1.7 [0.4-2.9]) respectively ($p<0.01$) (Figure 1A).
Patients reporting 'easy' or 'moderately-easy' on climbing a FOS had lower self-reported exertion on BORG responses then patients reporting 'moderately-hard' (-1.9 [-3.1—0.7]) and (-1.4 [-2.5—0.4]) respectively ($p<0.01$) (Figure 1B).
Patients reporting 'easy' had faster stair times compared to patients reporting 'moderately-hard' (-6.6 (s) [- 12.2-1.1]) ($p<0.05$) (Figure 1C)

Conclusion:

This pilot study has demonstrated that a scaled self-reported ability to climb one FOS is related to overall self-reported functional capacity and actual capacity to climb a FOS. As self-reported FOS capacity becomes harder, the actual performance variation becomes larger, suggesting that a more detailed sensitivity study is required with larger and more varied patient cohorts to further improve the accuracy of this measure.

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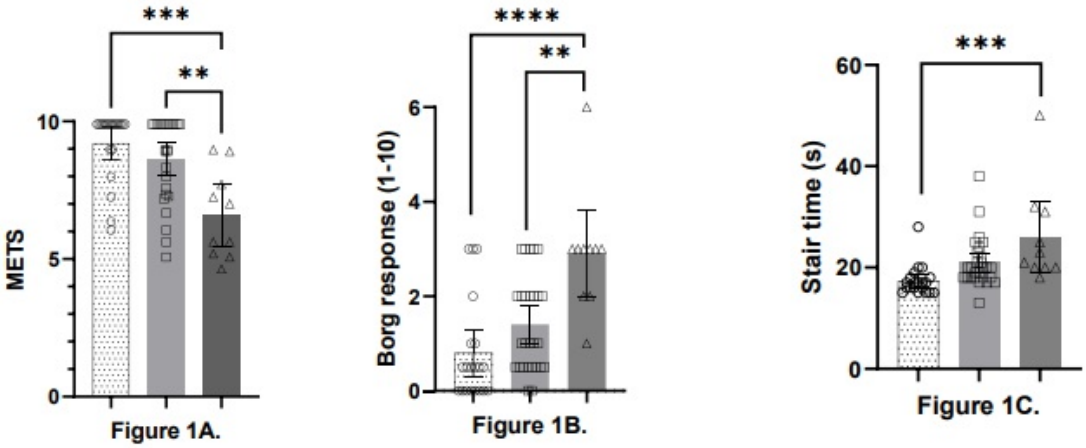

*Figure 1**A**: Self-reported METS **B**: rating of perceived exertion (BORG /10) and **C**: time (s) to complete a FOS for the groups 'Easy (circle), Moderately-easy (square) and Moderately-hard (triangle). Data is expressed as mean (SD)*

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Poster keywords

Preoperative assessment, Functional capacity, Stair climbing, Self-report, Fitness

34

Descriptive Analysis of Cardiac ICU Utilization and Admission Cost by MS-DRG

Marylin Moucharite[1], Frances Carr[2]
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Abstract

Introduction: A recent study found that non-cardiovascular primary diagnoses accounted for 14% of Cardiac ICU (CICU) admissions, with sepsis as the most common non-cardiac primary diagnosis (1). The purpose of this analysis was to examine the clinical conditions and costs for CICU admissions using real world data.

Methods: This descriptive analysis examined primary diagnoses of CICU admissions, admission cost, and CICU length of stay (LOS) using the Premier Healthcare Database®. Admissions were summarized by Medicare Severity Diagnosis Related Group (MS-DRG) which is a classification system used to facilitate hospital payments. All discharge records for patients 18 years and older with a billing line for the CICU in 2018 were selected. Discharge record weight values available in the Premier Healthcare Database® were applied to extrapolate discharge records to represent national admission counts.

Results: Table 1 summarizes the five most frequent MS-DRGs for each of the following categories: 1) highest number of admissions, 2) highest mean admission cost, and 3) longest mean CICU LOS. The most frequent MS-DRGs by number of admissions was 1) septicemia without mechanical ventilation (MV) with major comorbidities or complications (MCC) (mean cost=$19,011), 2) heart failure and shock with MCC (mean cost=$14,590), 3) placement of drug eluding stents without MCC (mean cost=$15,540), 4) placement of drug eluding stents with MCC (mean costs=$24,937), and 5) coronary bypass without MCC (mean cost=$32,840). The five most frequent MS-DRGs by cost of admission were related to organ transplants with mean costs of $171,352-$394,141. Two of the five most frequent MS-DRGs by CICU LOS were related to MV, with and without major surgery, and had sepsis as the most frequent primary diagnosis with mean costs of $168,932 and $96,070, respectively.

Conclusion: Using real world data, this analysis found that treatment of septicemia without MV with MCC was the MS-DRG with the highest number of admissions to the CICU. Organ transplants accounted for the highest cost MS-DRGs with CICU utilization. Analyzing the data by CICU LOS, sepsis was the most frequent primary diagnosis for two of the top five MS-DRGs.

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Table 1 Admission summary measures for five most
cost and CICU length of stay

MS-DRG - Description	N
Top 5 MS-DRGs by Number of Admissions	
871-SEPTICEMIA OR SEVERE SEPSIS WITHOUT MV >96 HOURS WITH MCC	54,657
291-HEART FAILURE AND SHOCK WITH MCC	32,845
247-PERCUTANEOUS CARDIOVASCULAR PROCEDURES WITH DRUG-ELUTING STENT WITHOUT MCC	31,254
246-PERCUTANEOUS CARDIOVASCULAR PROCEDURES WITH DRUG-ELUTING STENT WITH MCC OR 4+ ARTERIES OR STENTS	17,393
236-CORONARY BYPASS WITHOUT CARDIAC CATHETERIZATION WITHOUT MCC	15,655
Top 5 MS-DRGs by Mean Cost of Admission	
7-LUNG TRANSPLANT	6
1-HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM WITH MCC	1,423
5-LIVER TRANSPLANT WITH MCC OR INTESTINAL TRANSPLANT	56

2-HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM WITHOUT MCC	117
652-KIDNEY TRANSPLANT	215
Top 5 MS-DRGs by Mean CICU LOS	
3-ECMO OR TRACHEOSTOMY WITH MV >96 HOURS OR PRINCIPAL DIAGNOSIS EXCEPT FACE, MOUTH AND NECK WITH MAJOR O.R. PROCEDURES	4,791
1-HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM WITH MCC	1,423
4-TRACHEOSTOMY WITH MV >96 HOURS OR PRINCIPAL DIAGNOSIS EXCEPT FACE, MOUTH AND NECK WITHOUT MAJOR O.R. PROCEDURES	2,606
725-BENIGN PROSTATIC HYPERTROPHY WITH MCC	30
294-DEEP VEIN THROMBOPHLEBITIS WITH CC/MCC	8

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Poster keywords

Cardiac ICU, Sepsis, Descriptive analysis, Length of Stay, Utilization

35

An audit of frailty and outcomes in elective abdominal aortic aneurysm repair

Simon West, Laura Wilson, Victoria Whitby
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Abstract

Introduction

Frailty is a distinctive health state related to the ageing process in which multiple body systems gradually lose their in-built reserves. In major vascular surgery frailty is a recognised predictor of postoperative morbidity and mortality[1]. The Clinical Frailty Scale (CFS) is a rapid, simple, and validated assessment tool[2]. We sought to evaluate the effect of frailty, as identified by the CFS, on 30-day mortality, incidence of post-operative complication (Clavien-Dindo Classification) and length of hospital stay (LOS).

Methods

We retrospectively reviewed all patients undergoing elective open AAA repair or endovascular AAA repair (EVAR) at Liverpool University Hospital Foundation Trust (LUHFT)between December 2019 to 2021. The data set collected included preoperative demographic variables, preoperative risk factors, intraprocedural variables and CFS. In all analyses, CFS will be categorised around the value of 4 (4 or less vs >4).

Results

A total of 181 patients underwent elective AAA repair, of which 99 (54.7%) underwent EVAR repair and 82 (45.3%) underwent open repair. Of these 39 (21.5 %) patients were categorised as vulnerable (CFS 4) and 13 (7.2%) patients were categorised as frail (CFS>4) (Figure 1). We found a CFS of 4 or greater was not associated with a higher 30-day mortality (Chi-squared 10.07, P-value 0.12), higher incidence of postoperative complication (Chi-squared 6.84, P-value 0.33) or longer hospital stay (Mann-Whitney U, P-value 0.43).

Conclusion

Within our population frailty, assessed by the CFS, was not associated with worse outcomes. This finding is at odds with current literature which has demonstrated, that within the general vascular surgical population, frailty assessment using CFS predicts 30-day mortality and loss of independence at discharge[3]. This my partly be explained by the the low incidence of frailty within the audit population and because no patients who were deemed frail underwent open AAA repair. The low rates of surgical AAA repair on frail patients may suggest the current per-operative review appropriately selects vascular surgical patients.

References

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3.Shakarchi JA, Fiarhead J, Rajagopalan S, Pherwani A, Jaipersad A. *Annals of Vasc Surg* 67: 100-104,2020.

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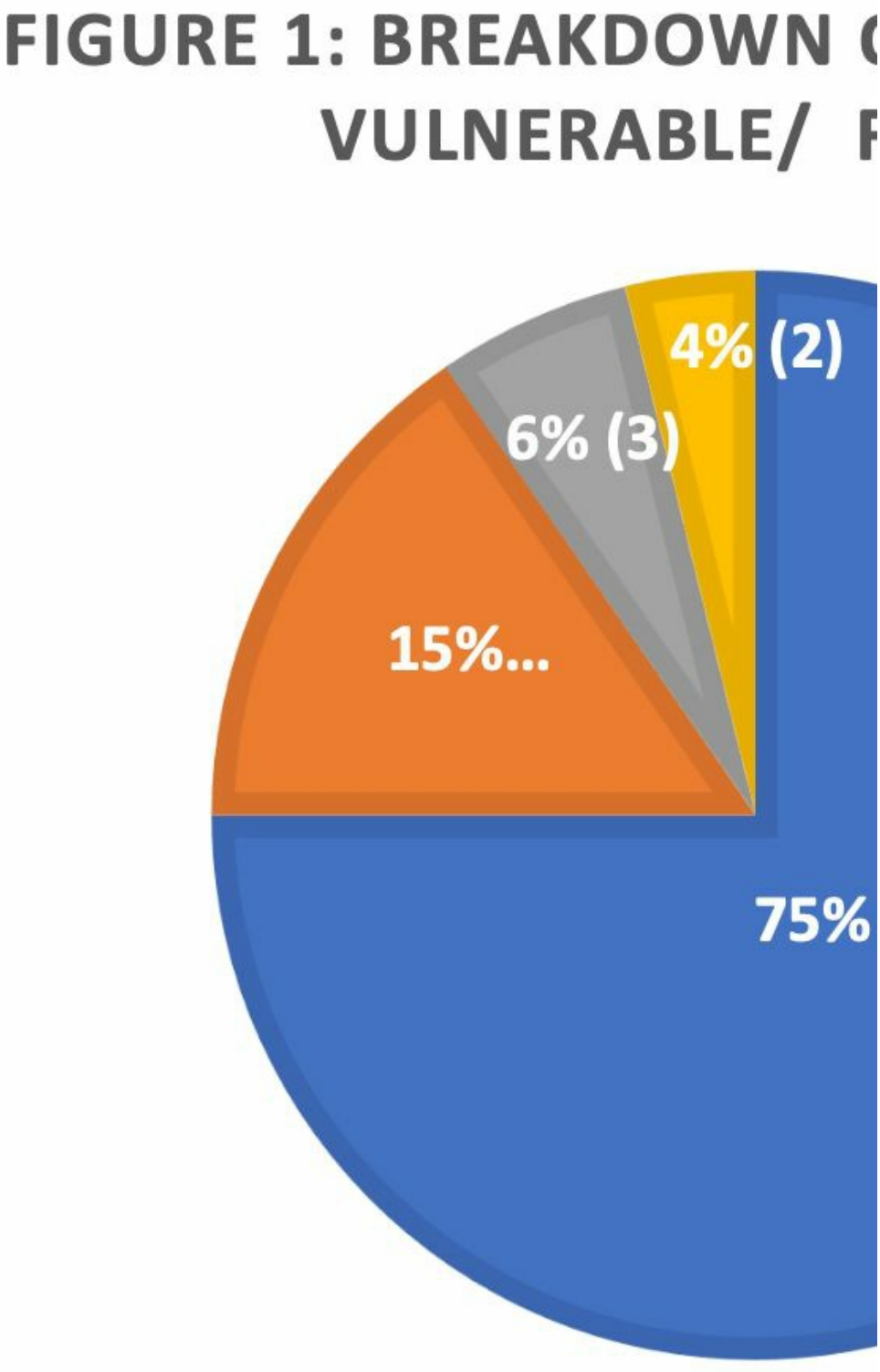

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Poster keywords

AAA, Frailty , Vascular , Clinical frailty scale

36

Effects of peri-operative hypotension on patient outcomes

Ryan Murphy, Michael McCusker, Thomas Reveell, Gary Thomson, Lucy Guile
Glasgow Royal Infirmary, Glasgow, United Kingdom

Abstract

Effects of peri-operative hypotension on patient outcomes
R Murphy, M McCusker, G Thomson, T Reveell, L Guile

Introduction: Peri-operative hypotension has been implicated in myocardial injury, acute kidney injury and post-operative mortality. This study aimed to evaluate the prevalence of hypotension in our patient population, and determine if there are any associations with hypotension and adverse patient outcomes.

Methods: We included all patients at a major city hospital (Glasgow Royal Infirmary) undergoing major surgery that required post-operative level 2 care during a two-month calendar period. Hypotension was defined as SBP < 100 for more than 2 consecutive readings in theatre (>5mins), and more than one hour SBP < 100 post operatively. SBP was chosen as MAP was not consistently documented. Fluid volumes (including crystalloid and blood transfusion) were recorded up to post-operative day three.

Patient outcomes were recorded using the post-operative morbidity survey (POMs) tool on day 7 post-operatively. We compared groups of patients that were hypotensive vs normotensive intra-operatively, and then post-operatively.

Results: Hypotension occurred intra-operatively in 41% of patients and in 35% of post-operative patients. In both groups the hypotensive patients received larger volumes of fluid and had a higher occurrence of post-operative morbidity.

This was particularly marked in those patients with post-operative hypotension, who had a 30% increase in morbidity compared to those who weren’t hypotensive. On average these patients received 4.72L more fluid per patient and had an average 4 day increase in length of stay.

Conclusion: Peri-operative hypotension is associated with an increase in patient morbidity and hospital length of stay. In addition, hypotension was associated with an increased positive fluid balance. Whilst it is impossible to determine whether hypotension is causal in the development of detrimental patient outcomes, this study suggests that hypotension is likely to cause harm. Adopting an evidence-based haemodynamic protocol may confer potential benefits and expedite patient recovery.

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Day 7 Morbidity

Average Fluid Volume per patient

Average Length of Stay

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Poster keywords

Hypotension, Post-op Morbidity, Peri-operative hypotension

37

Effect of a procedural sedation pro forma in the Emergency Department

Marc Lincoln, Lisa Ang, Katarzyna Domanska, Sinead Faughnan, Sarah-Jane Yeung
St James's Hospital, Dublin, Ireland

Abstract

Introduction

Procedural sedation is performed very commonly in the emergency department. While the Irish college of emergency medicine have no specific guidelines, the royal college of emergency medicine in the UK released standard guidelines for safe procedural sedation in 2012. In order to improve compliance with these standards, our department implemented a procedural sedation pro forma within the last year. The aim of this audit was to determine the compliance with this pro forma for patients undergoing procedural sedation and then to assess how well we are meeting the national standards[1].

Methods

This audit was carried out in the emergency department at St James's Hospital, Dublin over a 12 month period between September 2019 and August 2020. All patients who underwent procedural sedation for shoulder dislocation – a common injury requiring sedation in the ED – were selected. Data regarding the documentation of age, allergies, medications, medical history, last oral intake, number of doctors present, mallampati classification, ASA score, use of monitoring, drugs given, consent taken, capacity of patient and use of pro forma were gathered. Using this data, we established the effect of the pro forma in how well doctors met the standards of procedural sedation per UK guidelines.

Results

In the last year, sedation was performed 86 patients requiring shoulder relocation. Of these, the procedural sedation pro forma was used in 43 (50%). Documentation was much better in those who used the pro forma particularly with regard to pre-procedural assessment such as ASA grade ($P < 0.01$) and malampatti score ($P < 0.01$). Consent ($P < 0.01$) was much more clearly documented in the pro forma group compared with the non-proforma group and this was also true with regard to monitoring ($P < 0.01$). There were no significant differences in documentation of allergies and location of sedation. All results are tabulated in the figure attached (Table 1).

Conclusion

Use of pro forma for procedural sedation helped the department to meet national standards more closely. Despite this, use of the pro forma is low and a significant effort needs to be made to increase its use and in turn meet current standards. One way to do this would be to increase awareness of the pro forma through posters in the department and education at departmental teaching sessions.

References

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Poster keywords

Sedation, Emergency Medicine, Audit, Adult

38

Management of acute piriformis syndrome in a multi-morbid older adult

Aogán Ó Muircheartaigh, Rachel O'Connell, Wei Lan
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Abstract

Introduction

Piriformis syndrome is characterised by hip, buttock and lower limb pain caused by abnormal compression or irritation of the sciatic nerve as it passes through or under the piriformis muscle.[1] Local anaesthetic infiltration of the muscle can dramatically relieve symptoms which can be considered a diagnostic sign[2]. Analgesia from a single injection can last weeks to years[2]

Case report

An 86 year old lady with mild cognitive impairment, vitamin B12 deficiency, AAA and severe CAD was admitted with a three day history of severe lower back pain (LBP), right gluteal pain and inability to weight bear, preceded by two weeks of LBP. She had no history of trauma. Orthopaedic review and imaging demonstrated non-operative degenerative disease of lumbar spine and hips.

Multimodal analgesia was prescribed including paracetamol, oxycodone, morphine, tramadol, pregabalin, gabapentin, naproxen, tapentadol, transdermal buprenorphine and topical lidocaine patches. Multiple medication changes were required over a three week period due to ongoing pain, poor sleep and delirium.

At baseline, she was independently mobile and was independent in activities of daily living. She progressed poorly with multidisciplinary team input, who noted her mobility was significantly limited by right hip pain. She required assistance to transfer from bed to chair and a wheeled zimmer frame with moderate assistance to mobilise.

The patient was assessed by the consultant pain specialist, the assessment demonstrated a positive straight leg test (SLT) at 30 degrees on the right side, tenderness over the right piriformis muscle and positive piriformis test in side lying position. Following informed consent, she underwent an ultrasound guided right piriformis muscle injection with 10ml 0.25% bupivacaine and 80mg methylprednisolone with no complications and excellent analgesia immediately post-procedure (0/10 at rest, 3/10 on movement). She required no further breakthrough analgesia and described 80% improvement in her pain symptoms. Two days post-procedure she was able to mobilise 80m using a walking stick. She was discharged home a week later.

Conclusion

This case report demonstrates the important role of an interventional pain procedure in a multi-morbid older adult including reduced side effects from systemic medications, improved mobility and quality of life and earlier discharge from hospital.

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Poster keywords

piriformis syndrome, pain, intervention, polypharmacy, analgesia

39

Factors associated with interns' career decision making regarding anaesthesiology, intensive care medicine and pain medicine.

Cian Hurley, Patrick Walsh, Conor McGarrigle, Wei Lan
Department of Anaesthesiology, Intensive Care and Pain Medicine. Cork University Hospital, Cork, Ireland

Abstract

Background: The task of choosing a specialty for recently graduated doctors remains a challenging and multifactorial process [1]. Exposure to a specialty through clinical placement during medical school has been shown to impact a doctor's attraction towards a specialty [2-3]. Lack of accessibility and exposure to certain specialties, both in early clinical years and post qualification may therefore impact the interest and affinity towards pursuing a career in anaesthesia, intensive care medicine (ICM) and pain medicine.

Methods: An online questionnaire was distributed to recent medical graduates working in Ireland's South Intern Group to investigate their exposure to anaesthesia, intensive care medicine and pain medicine during their medical degree and whether this impacted their choice of this specialty in their career plan.

Results: Of the 25 interns that responded to the questionnaire 48% had chosen a specialty prior to commencing intern year. 52% had some degree of interest in anaesthesiology and ICM, while only 40% expressed an interest in pain medicine. Reasons cited for this low interest in pain medicine included a lack of clinical exposure and teaching during undergraduate studies. 64% of participants believed there was an inadequate level of teaching surrounding anaesthesia, ICM and pain medicine at undergraduate level as part of the medical curriculum. 80% were unfamiliar with the specialist anaesthesiology training (SAT) program in Ireland. Qualitative data suggest limited exposure to the career and poorly understood training pathways may impede the attractiveness of the specialty.

Conclusions: When choosing a career path in medicine, although multifactorial, a lack of exposure and insight to anaesthesia, ICM and predominantly pain medicine at an undergraduate level and during early postgraduate years may negatively affect the interest generated to this specialty.

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Poster keywords

Careers, Intern, Undergraduate medicine

40

Use of neuromuscular transmission (NMT) monitoring in Cork University Hospital

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Cork University Hospital, Cork, Ireland

Abstract

Introduction:

The aim of the audit was to establish the level of usage of neuromuscular monitoring in patients who received neuromuscular blocking agents as part of their general anaesthetic in Cork University Hospital (CUH) when compared to current guidelines. We wished to assess baseline attitudes to NMT usage in CUH, provide intensive education and reassess.

Latest recommendations from the association of anaesthetists of Great Britain and Ireland in December 2015 state:

"The peripheral nerve stimulator is a mandatory device if neuromuscular blocking drugs are used. It should be used from induction time until recovery from blockade and conscious return." ***[1]***

Methods:

We employed digital data collection, using an online form to audit practice in the department. Data was obtained from every level of anaesthetist in the department. Two baseline surveys were carried out, one in December of last year, we then repeated the survey in July of this year with a new group of doctors (after the changeover). We have since run several education sessions, regarding the NMT, and plan to reaudit the second group of doctors, at the beginning of September to assess changes of attitude, and usage of NMT, if any.

Results:

37 participants took part in the original online survey. Initial data collected showed a general good understanding of neuromuscular transmission (NMT) monitoring. 5.4% of participants always used NMT monitoring, 37% usually, 37% sometimes and 19% rarely. No participant answered never.

20 participants completed the subsequent online survey (6 Months post original survey). Again, there was good understanding of NMT monitoring. 20% of participants always used NMT monitoring, 30% usually, 35% sometimes, 15% rarely and no participant answered never.

Main reasons cited for non-usage of NMT monitoring was lack of equipment (55%). 35% admitted to forgetting to use NMT monitoring.

The second group will be re-audited at the start of September and results will be updated.

Conclusion:

Data suggests good baseline knowledge of NMT usage in the department, there are disparities between those citing that they always use the NMT; 4% in our initial survey vs 20% in our follow up survey. We are currently carrying out intensive education sessions. We will re-audit the second group, mentioned above, reassessing use of the NMT and attitudes towards same. Data will be collected at the beginning of September and will be compared with previous data.

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Poster keywords

NMT, Neuromuscular Blockade

41

A Systematic Review of Pre-emptive Analgesia in Orthopaedic Surgery.

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Abstract

Background: The role of pre-emptive analgesia in major surgeries have shown conflicting results. The present systematic review evaluates the role of pre-emptive analgesia on pain relief in patients who undergo orthopaedic surgery in the elective and emergency setting.

Methods: In 2020, a search was carried out in electronic databases to find trails and research papers in relation to pre-emptive analgesia in orthopaedic surgery (PubMed, Cochrane, Medline). Inclusion and exclusion criteria were applied. Inclusion criteria included trials that evaluated the use of pre-incisional analgesia against a placebo, surgery had to be specific to orthopaedic specialty and recording of post-operative pain intensity had to be carried out.

Results: The initial result yielded a total of 168 results. After removing duplicates, and papers which didn’t fit the inclusion criteria, the total amount of trials analysed in this systematic review was twenty two. The remaining trials were categorised by surgery and analysed. Of the 22 studies, nineteen trials supported the use of pre-emptive analgesia in orthopaedic surgery whereas three did not.

Conclusion: Pre-emptive analgesia has an important role in post-operative pain relief in orthopaedic surgery. From the studies analysed in this review, many support the use of pre-emptive analgesia to provide post-operative pain relief and in addition decrease post-surgical analgesia consumption.

References:

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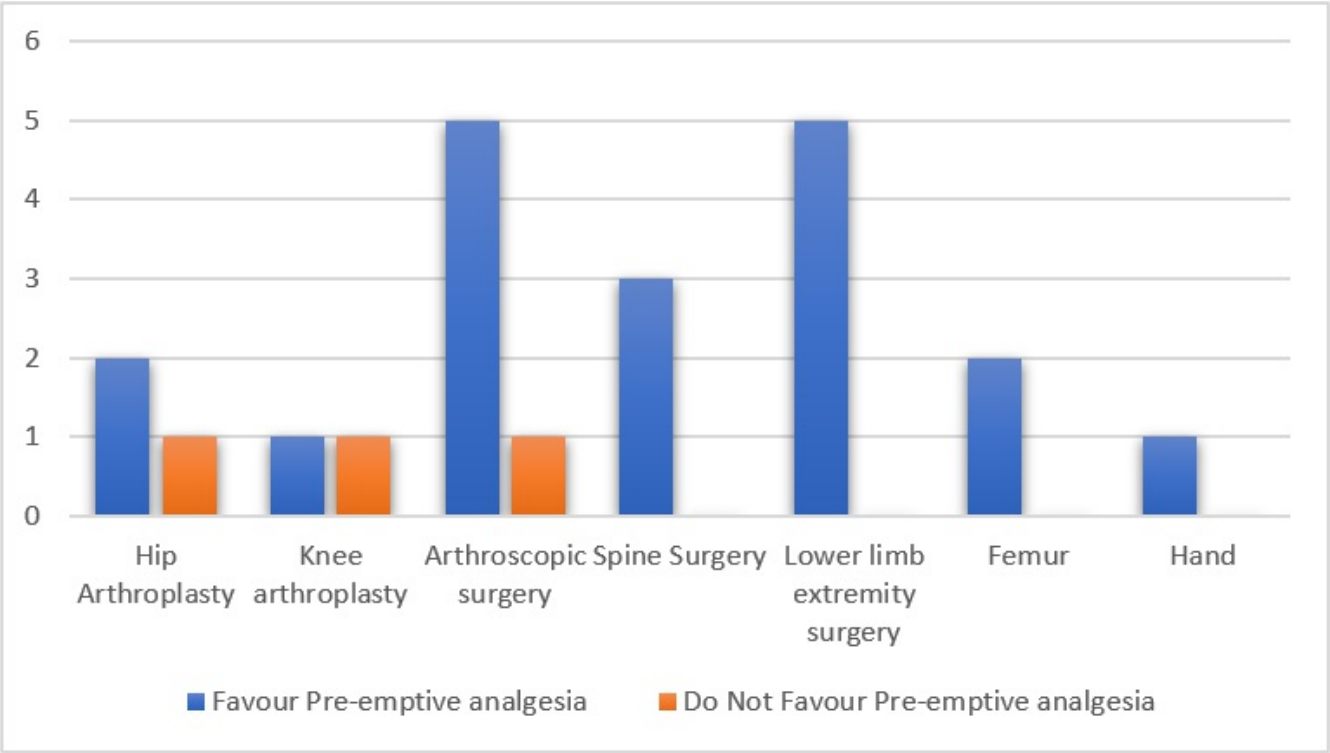

Table 1

Categories of Surgeries and number of trials which favour and do not favour Pre-er analgesia for post-operative pain relief.

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Poster keywords

Preemptive, Analgesia, Orthopedic Surgery, Pain, hip/knee/arthroscopic

42

IMAGe Syndrome: Airway and Anaesthetic Management, a Case Report

Avril McCarthy[1], Fergal Dineen[2], Brian O'Brien[1], John Chandler[1]
[1]Cork University Hospital, Cork, Ireland. [2]Mercy University Hospital, Cork, Ireland

Abstract

Intro

IMAGe syndrome (*I*ntra-uterine growth restriction, *M*etaphyseal dysplasia, *A*drenal hypoplasia congenita, and *Ge*nitourinary abnormalities) with POLE1 (polymerase E1) deficiency is a rare autosomal recessive multi-system disorder with a broad phenotypic presentation (1)(3). POLE1-deficient individuals have distinctive facial features and variable immune dysfunction. First described by Vilain et al in 1999, exact prevalence is unknown but twenty-eight individuals have been reported in the literature (2)(4).

IMAGe syndrome represents a complex challenge, albeit rare, for anaesthetists, who must manage dysmorphic facial features, global developmental delay, adrenal insufficiency and electrolyte imbalances (3).

We describe the peri-operative management of a child with IMAGe syndrome who has undergone ten general anaesthetics at our institution, with the hope that our experience in dealing with the challenges it presents may benefit the anaesthetic community in managing this rare condition in future.

Methods

The peri-operative anaesthetic management of a child with IMAGe syndrome was documented during their most recent anaesthetic and a thorough chart review was conducted to gather information on all previous anaesthetics. Parental consent was obtained.

Results

This case report documents the peri-operative course of 14 year-old boy, with a background of global developmental delay, severe short stature, adrenal insufficiency, oral aversion and obstructive sleep apnea under investigation. Preoperatively issues of a difficult airway, adrenal insufficiency and uncooperative behaviour were noted and prepared for. The airway was difficult secondary to reduced mouth opening, dental crowding/caries, gingival hypertrophy and micro/retrognathia.

A shoulder roll, Robertshaw blade and stylet were used to help secure the airway with good effect. IV access was obtained post gas induction without difficulty. Intra-operatively electrolyte disturbances including hyperkalaemia, hyponatraemia and hypocalcaemia were managed, as well as metabolic acidosis, hyperglycaemia and hypotension. Post-operative analgesia included paracetamol, diclofenac, oral morphine (Oromorph) and continuous surgical wound infusion with levobupivacaine 0.125%. Post-operatively he was monitored in the paediatric high-dependency unit with specialist endocrinology input.

Conclusion

IMAGe syndrome is an extremely rare genetic condition which presents a multifaceted challenge to anaesthetists. Detailed peri-operative planning and awareness of potential issues is crucial in managing the condition.

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	1	2	3	
Age	1 year, 6 months	3 years, 7 months	4 years, 9 months	5 years, 5 months
Weight (kg)	5.5	8.2	9.1	
Induction	Gas	Gas	IV	Gas
Airway	Difficult C+L 3 Stylet CoETT	Difficult C+L 4 Stylet CoETT	Difficult C+L 3 Aborted	Difficult C+L 4 Aborted
Induction Agents	Epidural, A, F	M, A	M, P, A	_____
Difficult	No	No	No	No

IV access				
Post operative analgesia	Pa, M	Pa, M	Pa, M	Nil

Table 1: Details of previous anaesthetics

A = Atracuronium, F = Fentanyl, M = Morphine, P = Propofol, V = Vecuronium
Pa = Paracetamol, Ib = Ibuprofen, D = Diclofenac sodium
Gas induction = Sevoflurane and oxygen
C+L = Cormac and Lehane
IV = Intravenous
LMA = Laryngeal mask airway, CoETT = Cuffed Endotracheal tube
_____ = Not recorded

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Poster keywords

IMAGe Syndrome, Airway management , Case report, Difficult airway

43

The Argument for Advanced Emergency Training among Pain Clinic Staff

Patrick Walsh[1], Conor McGarrigle[1], Jenny Fitzgibbon[1], Wei Lan[2]
[1]Cork University Hospital, Cork, Ireland. [2]South Infirmary Victoria University Hospital, Cork, Ireland

Abstract

We report the case of a 66-year-old lady who presented as a planned, elective case for a subacromial corticosteroid injection due to chronic shoulder pain. She had multiple comorbidities, including a previous haemorrhagic stroke secondary to an arteriovenous malformation (AVM). In spite of her complex history, she had no vital signs taken before the procedure, and was unmonitored. After cleaning and draping, prior to the administration of the steroid injection, a severe headache was reported by the patient. Consciousness was quickly lost, and her Glasgow Coma Scale (GCS) dropped to 8. Monitoring was applied, and she remained haemodynamically stable. It was suspected very early that she had had an acute cerebrovascular event, which allowed for a prompt intubation and initiation of neuroprotective measures. Urgent CT confirmed a Fisher grade 4 subarachnoid haemorrhage (SAH). Rapid transfer to a neurosurgical centre facilitated endovascular coiling, which subsequently allowed the patient to make a full recovery.

SAH arising from a ruptured aneurysm has a median case fatality of approximately 44% [1] and can often be misdiagnosed leading to unfavourable outcomes [2]. With appropriate training, correct diagnosis and rapid treatment however, this figure can be significantly reduced [3]. Appropriate anaesthetic management in the perioperative period, is therefore of critical importance in determining overall outcome in SAH. This case highlights how a quick diagnosis and good anaesthetic management are vital for successful outcomes in SAH.

While the pain service accommodates a cohort of patients with multiple co-morbidities, the delivery of this service is often in a location isolated from immediate support in the event of an emergency. This highlights the importance of ensuring all staff involved in this service are skilled in resuscitation. We argue that enhanced healthcare worker training through simulations and educational sessions can have a profound impact on patient mortality and recovery.

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Poster keywords

Emergency Training, Subarachnoid Haemorrhage, Pain Clinic, Pain Medicine, Educational Simulation

44

Postoperative laboratory testing as a marker of value –– comparative observational study

Tom Salih[1], Rishi Kothari[1], Maddie Wells[2], Aman Sarna[2], Max Neun[2], Claus Niemann[1], Garrett Roll[1], Michael Spiro[2], Seema Gandhi[1]
[1]UCSF, San Francisco, USA. [2]Royal Free Hospital, London, United Kingdom

Abstract

Introduction

Laboratory testing is the highest volume medical procedure (1) however indications for postoperative tests are poorly defined. Unnecessary tests that are routinely ordered represent low value care. We investigated whether testing could be used as a comparative measure of healthcare waste.

We hypothesized that since the United States is a global outlier in healthcare spending (2) the frequency of postoperative labs would be comparatively high. Our objective was to compare two centres for frequency and results of postoperative lab testing after liver transplantation.

Methods

Study setting was Royal Free Hospital (RFH) in the United Kingdom and University of California San Francisco (UCSF) in the United States. We performed a retrospective comparative study using health record data. Participants were adult patients who received a low-risk liver transplant, defined as a model for end stage liver disease (MELD) score below 20, between 2012 and 2020.

Postoperative laboratory testing was characterised by test frequency and interval change of test result.

Results

We included 867 participants (211 at RFH and 656 at UCSF). Baseline patient characteristics were similar at each centre (Table 1). Frequency of testing and interval change were similar between centres on both postoperative day 1 and 5. Some tests (Figure 1) were performed at high frequency at both centres.

Median length of hospital stay and intensive care stay were longer at RFH (15 days vs 8 days and 63 hours vs 41 hours respectively) and this corresponded to a higher median count of laboratory test components (363 vs 176).

Conclusion

Our hypothesis that the US centre would test more frequently was not confirmed. Shorter admission was associated with reduced laboratory resource use. We did not adjust for patient or hospital factors.

Comparing laboratory testing is convenient due to easy quantification of test frequency and results. Retrospectively classifying tests as unnecessary was challenging without clinical correlation. We have not confirmed the utility of this approach with relevance to quantifying value but identified areas for further investigation. Planned future studies aim to 1) explain the UK-US length of stay difference in liver transplant admissions and 2) characterise postoperative laboratory testing patterns at a national level across surgical specialties.

References

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Table 1 | Patient characteristics and laboratory testing

	RFH, United Kingdo
Patient characteristics	
n	211
Patient age, years	57 (50 to 62)
Patient weight, kg	78 (66 to 90)
MELD score	13 (10 to 16)
Hospital length of stay, days	15 (11 to 22)
ICU length of stay, hours	63 (43 to 115)
Laboratory testing characteristics, per patient *	
Total inpatient laboratory orders, n	363 (280 to 506)
Inpatient orders in first 5 postoperative days, n	158 (130 to 205)
Postoperative day 1	
Test count, n	59 (43 to 61)
Time since previous, hours	6.0 (5.5 to 6.4)
Change in result from previous, %	7.8 (5.9 to 9.6)
Postoperative day 5	
Test count, n	14 (13 to 17)
Time since previous, hours	23.2 (14.6 to 24.2)
Change in result from previous, %	9.3 (6.7 to 12.7)

MELD = model for end stage liver disease, Results are median (interquart
components as listed in Figure 1

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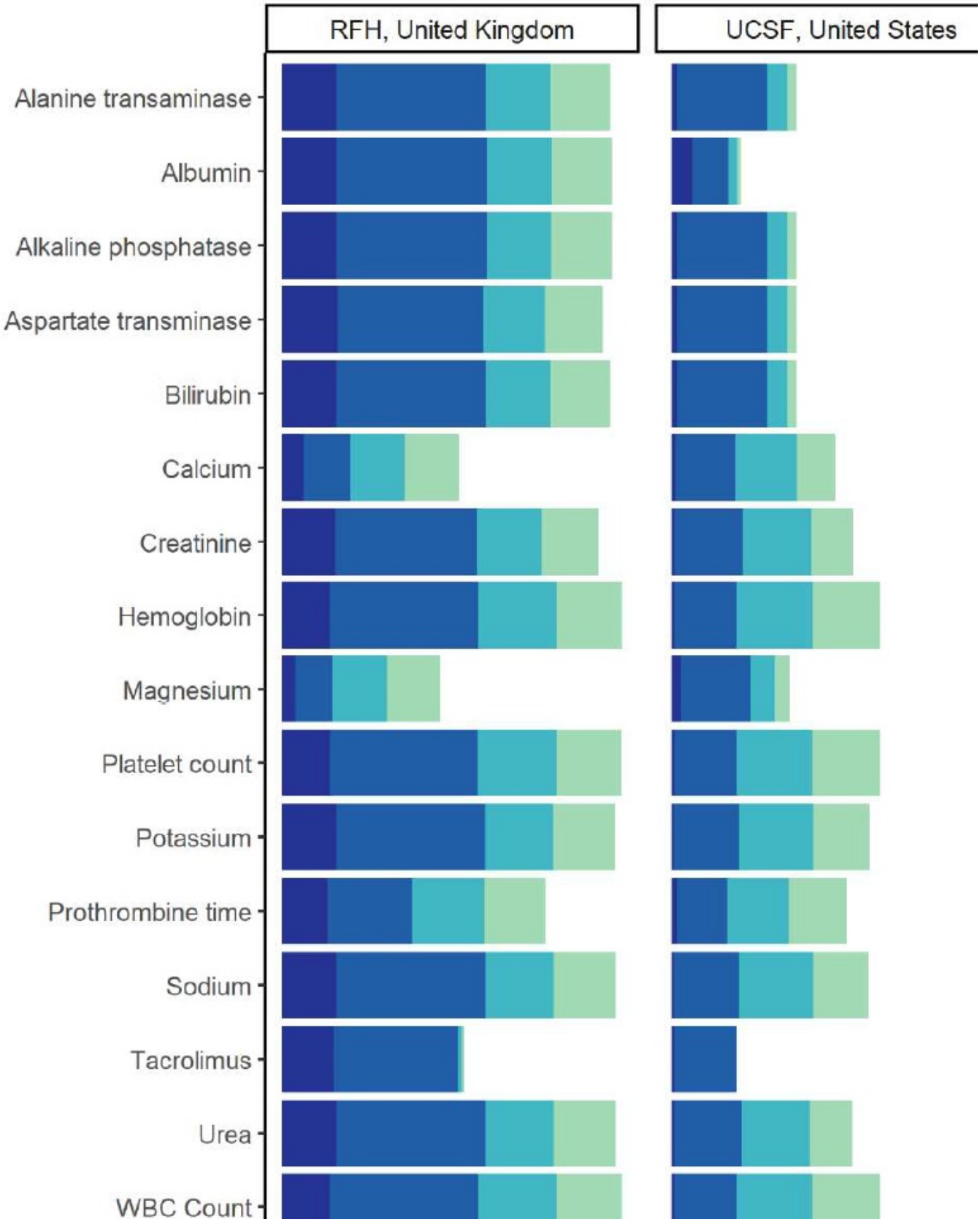
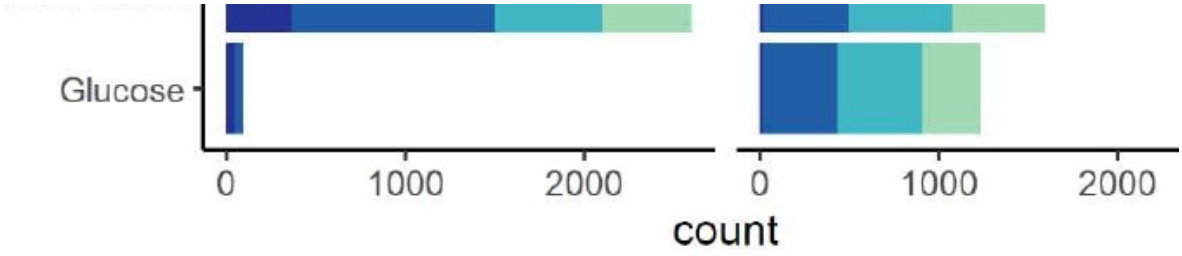
Figure 1 | Postoperative laboratory tests per 100 patient admissions
Tests more than 30 days after surgery excluded





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Poster keywords

Sustainability, Value, Waste, Transplant

45

An audit on pre-operative coagulation studies in a tertiary hospital

Claire Gibbons, Donal Rafferty, Erin Naughton, Padraig Calpin, Aoife Brennan
University Hospital Galway, Galway, Ireland

Abstract

Introduction

Pre-operative coagulation studies are used to help determine a patient's perioperative bleeding risk (1). Studies have demonstrated a poor positive predictive value for bleeding with an abnormal coagulation study (2). It has also been demonstrated that perioperative bleeding rates are similar in patients with and without an abnormal coagulation study (1). Coagulation testing should be limited to those with a personal or family history of bleeding disorders, those on certain anticoagulants and those with an acute illness which may be associated with a coagulopathy (1). Our aim was to assess the rate of routine pre-operative coagulation testing in Galway University Hospital.

Methods

We retrospectively reviewed the records of patients presenting for surgery to GUH over a one-week period and noted whether they had a pre-operative coagulation study performed. In addition, we noted patient demographics, surgery type and form of anaesthesia used, and assessed if there was a clinical indication to perform a pre-operative coagulation test according to best practice guidelines. We also assessed if a coagulation study influenced perioperative clinical decisions.

Results

146 patients had surgery over a one-week period. Patients were aged between 1 and 98 years, 55% of patients were male and 70% of cases were performed electively. The majority of cases were performed under general anaesthetic, with approximately 40% of patients having a pre-operative coagulation study. Less than 1 in 5 tests had a clinical indication and less than 10% of tests had an abnormal result. No coagulation test result resulted in a change in management.

Conclusion

Pre-operative coagulation tests are performed for a significant proportion of patients with no clear indication. This contributes to healthcare costs as well as patient discomfort and places patients at the inherent risks of unnecessary venipuncture. On the basis of this we intend to increase awareness amongst NCHDs and consultant surgeons to reduce unnecessary pre-operative coagulation studies.

References

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yes

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Poster keywords

Pre-operative investigations, Coagulation studies

46

Relationship between Frailty and Cardiopulmonary Exercise Test (CPET) outcomes

Dr David Harvie[1,2], Sitari Bali[1], Gurinder Rayat[1], Professor Denny Levett[1,2]
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Abstract

Introduction:

Assessing a patient's risk prior to surgery and allowing shared decision making regarding on-going care is vital. CPET has an established role in the evaluation of perioperative risk in surgery(1). Frailty as an independent risk factor for surgery has been recognised in the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) report, 'An Age Old Problem'(2). The primary aim of our study was to assess any association between Frailty assessment and CPET outcomes.

Method:

This was a prospective observational study in a tertiary hospital. Data was collected over an 18month period. Participants were eligible for inclusion if they underwent a CPET prior to surgery aged over 18years old. Exclusion criteria included participant refusal. The frailty assessment was performed immediately prior to performing their CPET. The Reported Edmonton Frail Scale (REFS) was used to assess frailty undertaken by the attending clinician, compromised of Clinical Physiologists and Anaesthetists.

Results:

We collected data on 905 patients. Of these, 82 patients were unable to gain complete CPET outcomes. These 82 patients would automatically be placed in the 'high risk' group of CPET outcomes. 7 patients had loss of data so were excluded from the results. 816 patients had complete data of CPET and frailty scores.

The 'high risk' group frailty scores were; 2.4% Severe frailty, 11% Moderate, 11% Mildly Frail, 24% Apparently Vulnerable, 51% Not frail.

Within the complete data set there was a statistically significant difference between frailty groups for Anaerobic threshold (AT) (mls/min/kg) as determined by the one-way ANOVA ($F(4,811) = 13.54$, $p = 0.000$) (*Table 1*). PeakVO2 ($F(4,811) = 18.34$, $p = 0.000$). VE/VCO2 ($F(4,811) = 20.47$, $p = 0.000$).

A Tukey post hoc test (*Table 2*) revealed that the AT was lower with increasing frailty scores. The AT was statistically significantly lower in the AV group (9.28 ± 2.37 mls//kg/min, $p = 0.00$), Mildly (9.06 ± 2.37 mls/min/kg, $p = 0.00$), and Moderate (8.43 ± 1.82 mls/kg/min, $p = 0.06$) compared to the Not Frail group. There was no significant difference in the Severely frail ($p = 0.291$).

Conclusion:

The use of Reported Edmonton Frail Scale shows a relationship with the outcomes of Cardiopulmonary Exercise Testing. Patients with a increasing frailty score were likely to have CPET outcomes associated

with higher risk patients.

References:

1. Older PO, Levett DZH. Cardiopulmonary Exercise Testing and Surgery. Annals of the American Thoracic Society. 2017;14(Supplement_1):S74-S83.

2. Martin ICWK. An Age Old Problem A review of the care received by elderly patients undergoing surgery. National Confidential Enquiry into Patient Outcome and Death. 2010.

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Table 1

Anaerobic Threshold (mls/kg/min)

	N	Mean	Std. Deviation	Std. Error	95% Inter Low Bou
Not Frail	652	10.737	2.6103	.1022	10.
Apparently Vulnerable (AV)	91	9.277	2.3687	.2483	8.
Mildly Frail	52	9.067	2.3705	.3287	8.
Moderately Frail	15	8.433	1.8188	.4696	7.
Severely Frail	6	8.683	3.7247	1.5206	4.
Total	816	10.410	2.6445	.0926	10.

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Table 2:

Multiple Comparisons against Not Frail

Frailty group	Frailty group	Mean Difference	Std. Error	Sig.
Not Frail	AV	1.4600*	.2872	.00
	Mild	1.6697*	.3699	.00
	Moderate	2.3036*	.6703	.00
	Severely	2.0536	1.0527	.29

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Poster keywords

Frailty, CPET, Surgery, Preassesment

47

Outcomes for patients attending a new high-risk surgical decision-making clinic utilising cardiopulmonary exercise testing (CPET).

William Jones, Gary Matthews, Michael O'Connor
Department of Anaesthetics, Royal Cornwall Hospital NHS Trust, Truro, United Kingdom

Abstract

Introduction:

We performed a 12-month retrospective audit of the impact of a high-risk surgical decision-making clinic utilising cardiopulmonary exercise testing (CPET) at the Royal Cornwall Hospital, UK.

Methods:

We reviewed notes for all patients seen in CPET clinic from 1st January to 31st December 2020.

Results:

The service saw 106 patients. 31 (29%) were women and the median age was 75 years, (IQR 69,80). Most were referred for general surgery (47, 44.3%) or vascular operations (27, 25.5%). 46 (43.4%) were ASA2 and 58 (54.7%) were ASA3. The median predicted 30-day mortality for patients was 2% (IQR 1,5) and 31 (29.2%) were in a high-risk category with a predicted mortality greater than 5%.

Anaerobic threshold (AT), peak oxygen uptake (VO_{2peak}) and minute ventilation/carbon dioxide production (VE/VCO_2) indices were reviewed. 70 (74%) patients were placed into a validated 'high risk' category by at least one of these CPET indices (AT < 11mL/kg/min; VO_{2peak} < 15ml/kg/min; VE/VCO_2 > 32). 25 (24%) patients were referred on for further investigations.

65 (61%) patients have since undergone surgery and 26 (25%) are pursuing a non-surgical course after CPET. Clinic assessment recommended 17 (26%) and 47 (72%) of those completing surgery to receive level 1 and level 2 care postoperatively, respectively. Of those 17 patients recommended to level 1 care, 16 (94%) received it, while one received level 2 care. Of those 47 patients recommended to level 2 care, 31 (66%) received it, while 15 (32%) received level 1 care and one received level 3 care. Our data suggest that there is no significant difference in morbidity and mortality between patients recommended to level 2 care following CPET, who ultimately receive level 1 vs level 2 care, postoperatively [Table 1].

Median length of hospital and level 2/3 care stay was six days (IQR 4,6) and two days (IQR 1,4), respectively. All patients were discharged to their usual place of residence. 15 patients (23%) who had surgery were re-admitted and five patients (8%) died, within six months.

Conclusion:

Preoperative utilisation of CPET allows this clinic to accurately predict which patients can safely receive

level 1 care postoperatively. Careful postoperative assessment on the day of surgery can permit a select group of high-risk patients recommended to level 2 care to safely receive level 1 care, postoperatively. This is significant given the high demand for level 2 beds. There remains significant morbidity and mortality in this high-risk group.

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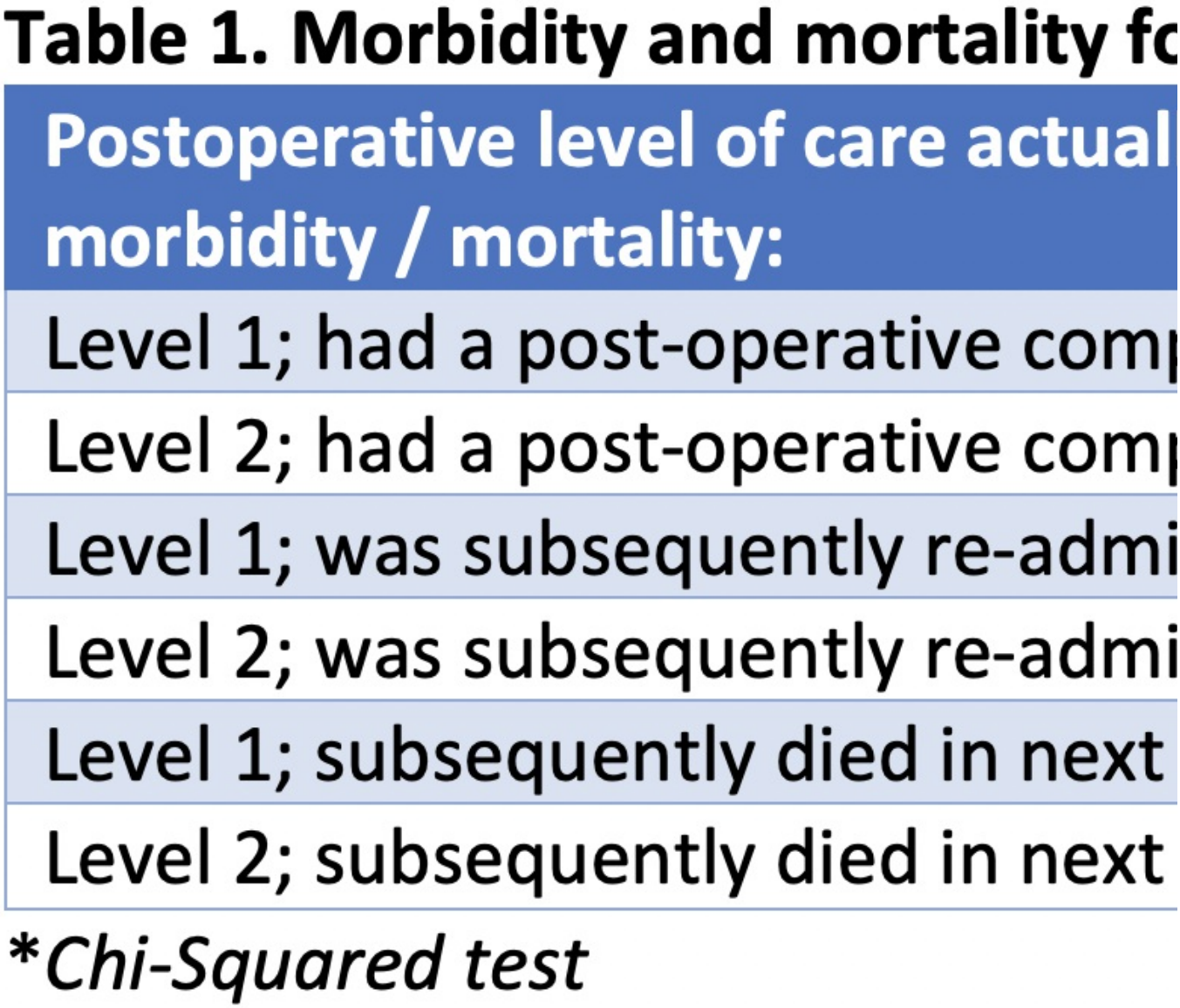

Table 1. Morbidity and mortality fo

Postoperative level of care actual morbidity / mortality:
Level 1; had a post-operative comp
Level 2; had a post-operative comp
Level 1; was subsequently re-admi
Level 2; was subsequently re-admi
Level 1; subsequently died in next
Level 2; subsequently died in next

**Chi-Squared test*

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Poster keywords

CPET, Cardiopulmonary exercise testing, High-risk, Preoperative assessment, HDU

48

Leukocyte Larceny, a curious case of hypoxia in HDU.

Ciarán Doherty, Rob Plant, Annlin Bejoy Philip
CUH, Cork, Ireland

Abstract

Introduction

A 60 year old lady presented with one week of dyspnoea, headache and blurred vision.

Initial bloods were significant for a white cell count of 591 and arterial pO2 of 6.6 despite an FiO2 of 0.6, giving a PF ratio of 83.

Respiratory rate was 22 and, unexpectedly, pulse oximetry SpO2 was 95%. Other vitals were within normal ranges. Examination demonstrated bibasal crepitations, pedal oedema and splenomegaly, admission CXR showed mild bilateral infiltrates.Background history consisted of schizophrenia, hypothyroidism and smoking.

A diagnosis of leukostasis, likely due to CML, was made. She was admitted to ICU for respiratory support and leukapheresis.

Methods

The discrepancy between pO2, SpO2 and lack of respiratory distress was hypothesised to be due to so called “leukocyte larceny”. This occurs when high volumes of malignant leukocytes with enhanced metabolic activity consume oxygen within a blood sample, leading to low pO2 readings. To prove this hypothesis we measured the pO2 in ABG samples repeatedly over a set time interval. Ordinarily, repeatedly measuring pO2 in the same sample should demonstrate pO2 increase as oxygen diffuses inwards.

Results

Our experiment demonstrated a decrease in pO2 in the same ABG sample, indicating in vitro oxygen consumption (see Table 1)

Our patient received hydroxyurea and rasburicase and underwent leukapheresis.This led to a significant improvement in her symptoms and WCC and discharge to ward level care.

Conclusions

Leukostasis is a medical emergency and critical care referral is recommended. Complications include respiratory failure, microcirculatory impairment, neurological impairment, renal failure, coagulopathy and tumour lysis syndrome. Mortality can be up to 40% within first week of presentation. Therapy includes fluid resuscitation, cytoreduction with chemotherapy or leukapheresis and tumour lysis syndrome prophylaxis.

Leukocyte larceny is a condition of spuriously low arterial pO2. It can be confirmed by repeated measurement of ABG samples. Pulse oximetry provides a more accurate monitor of oxygenation.

Another theoretical investigation would be to add a histotoxic compound such as potassium cyanide to a blood sample. This should arrest oxygen consumption and demonstrate no pO2 decrease over time.

While our patient had a degree of respiratory failure due to her leukostasis, the severity was initially overestimated due to inaccurate pO2. Knowledge of this testing anomaly can prevent overtreatment and unnecessary intervention.

References

1 Porcu P, et al. Hyperleukocytic leukemias and leukostasis: a review of pathophysiology, clinical presentation and management. Leuk Lymphoma. 2000;39(1-2):1.

2 R K Chillaret al Explanation for apparent hypoxemia ssociated with extreme leukocytosis: leukocytic oxygen consumption, Blood, 1980 Jun;55(6):922-4. PMID: 737858

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Sample	Immediate	5 minutes
Sample 1 (pO2 in kPa)	8.7	
Sample 2 (pO2 in kPa)	7.4	
Sample 3 (pO2 in kPa)	8.5	

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Poster keywords

ICU, Critical Care, Respiratory, Haematology, Blood Gas Analysis

52

Optimisation of Bone Health in Chest Trauma

Eleanor Lee, Sheena Hubble
Royal Devon and Exeter NHS Trust, Exeter, United Kingdom

Abstract

Introduction: The Royal Devon and Exeter (RD+E) hospital admits approximately 140 patients with chest trauma per year, the majority under general surgery. Although rib fractures have not historically been considered a classical osteoporotic fracture, recent research has shown that rib fracture is a predictor of low bone mineral density and future fractures, especially among the elderly population.(1,2) Currently, chest trauma patients represent a patient cohort where osteoporosis may be under-diagnosed and therefore under-treated. Our aim was to optimise future bone health for chest trauma patients by including bone health assessment within the standardised approach to chest trauma care.

Methods: Baseline data were collected from all chest trauma patients admitted under the surgical take from January to April 2021. Data focused on 2 main questions: 1) Was bone health considered during admission? 2) Was there a documented decision and/or management plan with regards to bone health at discharge?

2 quality improvement initiatives were implemented. In April 2021 bone health assessment was incorporated into the daily electronic note template for chest trauma. In May 2021 a trust clinical guideline was produced, using latest guidance and multi-specialty expertise. Re-audit of data is ongoing.

Results: 54 chest trauma patients were admitted to general surgery at the RD+E in the period from the 4th of January to the 19th of April 2021. 34 (62.9%) patients presented with a fall from standing height and the average patient age was 76.5. 16 (29.6%) patients had a documented consideration of bone health. Of these, 10 (18.5%) patients had a documented decision and/or management plan addressing future bone health.

Conclusion: Baseline data highlighted chest trauma patients were not routinely undergoing an assessment of bone health within our centre. Through quality improvement measures, including the implementation of a unique guideline, we have aimed to make the consideration of bone health within the chest trauma patient cohort routine. Preliminary data suggest significant improvement in the rate of bone health assessment and we aim to share our guidance widely.

References:

1. Ismail, A.A., Silman, A.J., Reeve, J. et al. Rib fractures predict incident limb fractures: results from the European prospective osteoporosis study. Osteoporos Int 17, 41–45 (2006).
2. Sajjan SG, Barrett-Connor E, McHorney CA, Miller PD, Sen SS, Siris E. Rib fracture as a predictor of future fractures in young and older postmenopausal women: National Osteoporosis Risk Assessment (NORA). Osteoporos Int. 2012 Mar;23(3):821-8.

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Poster keywords

Bone Health, Chest Trauma, Osteoporosis

53

Preoperative aerobic fitness in bladder cancer patients was adversely affected by the COVID-19 pandemic

Nicholas Tetlow[1,2], Robert Stephens[1,2], Daniel Martin[2,3], Melanie Tan[1], John Kelly[4,2], Ashwin Sridhar[4], John Whittle[1,5]

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Abstract

INTRODUCTION

The COVID-19 pandemic has significantly impacted planned healthcare delivery globally. Nationally mandated lockdowns and public health measures resulted in direct and indirect restrictions to individual movement and access to physical activity. Since aerobic fitness is directly related to postoperative outcomes, generally and specifically in bladder surgery(1), we hypothesised that the implementation of national lockdowns had a deleterious effect on preoperative aerobic fitness before cystectomy.

METHODS

We retrospectively reviewed cardiopulmonary exercise testing (CPET) data for patients who attended our cystectomy pre-assessment clinic between September 2018 & June 2021 and underwent surgical intervention. All patients underwent CPET in accordance with POETTS guidelines as part of their routine assessment. Data collected before March 2020 was classified as pre-lockdown. To minimise bias, all tests were interpreted by two physiologists and a CPET-experienced consultant anaesthetist.

Data were assessed for normality using the Shapiro-Wilk test and, as appropriate, presented as median (IQR) or frequency(%) with P-values obtained using Mann-Whitney, Kruskal-Wallis with Dunn's multiple comparison, Chi squared or Fisher's exact tests. Significance was set at $p<0.05$ and all analyses were performed using GraphPad Prism (Version 9.2.0).

RESULTS

One-hundred and sixty-eight patients underwent CPET and subsequent cystectomy: 88 patients were assessed pre-lockdown and 80 post-lockdown. There was no difference in demographic features between groups (Table 1).

Comparing pre- to post-lockdown (Figure 1), there was a significant difference in median values for A) peak oxygen uptake (VO_{2peak}) [17.19 (14.10-20.85) versus 15.62 (12.90-19.51), p=0.0376] and B) anaerobic threshold (AT) [10.32 (9.12-12.35) versus 9.03 (8.13-10.92), p=0.0004], (values for AT and VO_{2peak} are ml/kg/min).

A significant difference between medians (C) in AT was noted for patients aged >65 pre-lockdown 10.41 (9.12-12.19) versus 8.70 (7.59-10.38) post-lockdown, p=0.0009, but not for those aged ≤65.

CONCLUSION

We observed a decrease in preoperative aerobic fitness in patients undergoing cystectomy after initiation of national lockdown measures. Reduced aerobic fitness is associated with adverse outcomes and greater resource use in patients undergoing cystectomy(1). When stratified by age, patients >65 years only demonstrated a significant reduction in AT. Interventions aimed at this population, e.g. multimodal prehabilitation, should be considered to meet the demands of a recovering post-pandemic healthcare system.

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1. Tolchard S, Angell J, Pyke M, et al. Cardiopulmonary reserve as determined by cardiopulmonary exercise testing correlates with length of stay and predicts complications after radical cystectomy. BJU Int. 2015;115(4):554–61.

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Table 1. Demographic data for patients undergoing cystectomy

Variable	All	Pre-Lockdown	Post-Lockdown
No (%)	168 (100%)	88 (52%)	80 (48%)
Age, years	68 (60-73)	68 (62-73)	68 (59-73)
BMI, kg/m^2	26.65 (24.03-30.60)	26.50 (23.93-30.83)	26.75 (24.23-30.58
Gender:			
Male (%)	126 (75%)	70 (80%)	56 (70%)
Past Medical History:			
Ischaemic Heart Disease	11 (7%)	7 (8%)	4 (5%)
Peripheral Vascular Disease	13 (8%)	7 (8%)	6 (8%)
Cerebrovascular Disease	5 (3%)	1 (1%)	4 (5%)
Chronic Pulmonary Disease	17 (10%)	12 (14%)	5 (6%)
Diabetes Mellitus			
NIDDM	26 (16%)	13 (15%)	13 (%)
IDDM	5 (3%)	3 (3%)	2 (3%)

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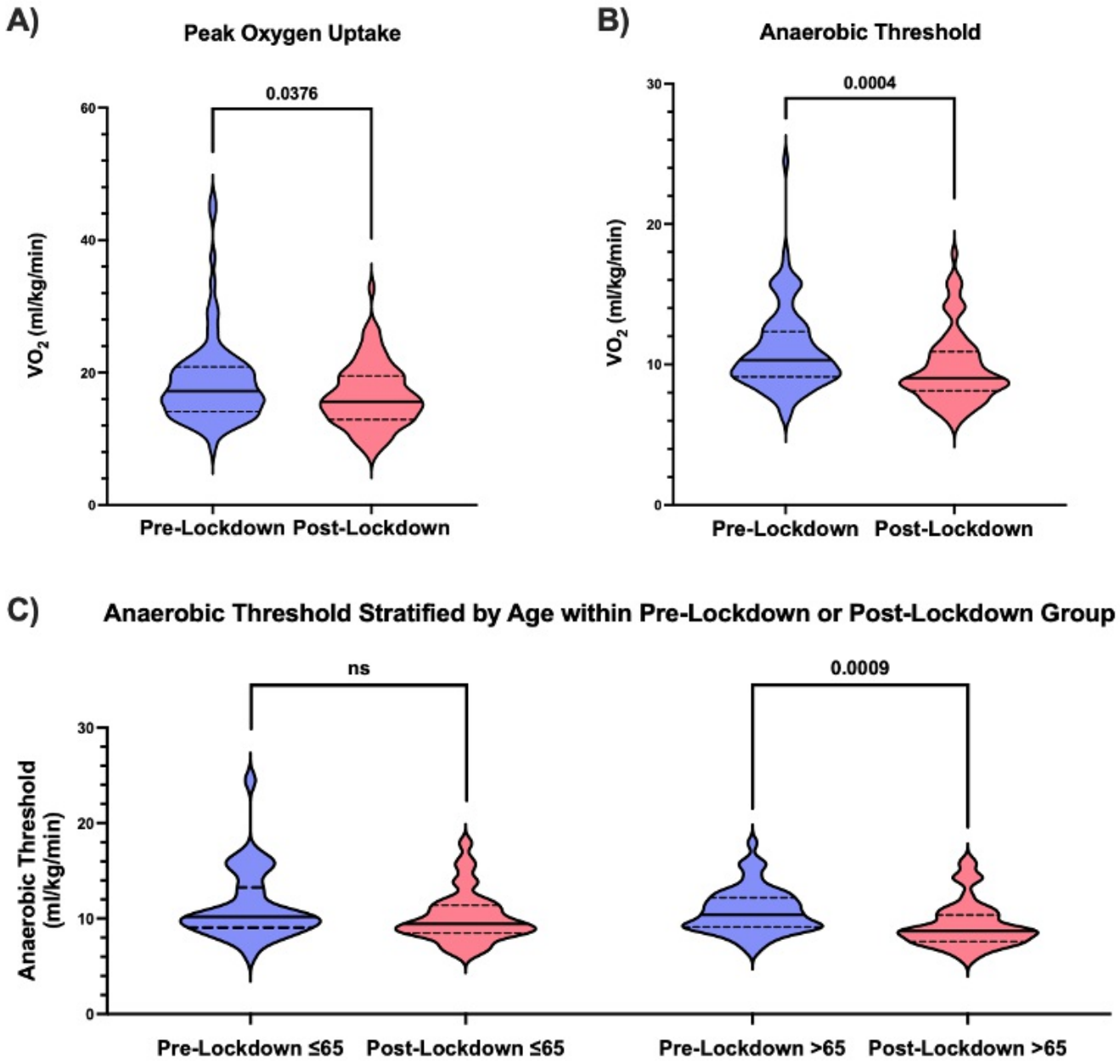

Figure 1. Changes in objectively measured cardiorespiratory fitness profiles commonly associated with postoperative morbidity and mortality between the pre-lockdown and post-lockdown group for A) peak oxygen uptake, B) anaerobic threshold and C) anaerobic threshold stratified by age, ≤65 or >65 years. Solid and dashed lines correspond to median and interquartile range, respectively.

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Poster keywords

CPET, Aerobic fitness, COVID-19 , Cystectomy, Lockdown

54

Relation Between Postoperative Delirium and Preoperative Routine Serum Biomarkers.

Nada Mousa[1,2], Thomas Jackson[1], Tonny Veenith[1], Leila Quffa[3], Doaa Mohamed[4], Fang Gao-Smith[1]
[1]Institute of Inflammation and Ageing, University of Birmingham, Birmingham, United Kingdom. [2]Department of Anaesthesiology, Intensive Care and Pain Managment, Faculty of Medicine, Menoufia University, Shibin Elkom, Egypt. [3]University of Birmingham Hospitals Foundation Trust, Birmingham, United Kingdom. [4]Department of Public Health and Community Medicine, Faculty of Medicine, Menoufia University, Shibin Elkom, Egypt

Abstract

Introduction and Aim of the Work:

Delirium is a common complication in geriatric patients1. *Delirium* is a neurobehavioral disorder resulting from disturbance of neuronal activity secondary to systemic changes2. Some evidence supports that the pathophysiology of delirium is associated with perioperative neuroinflammation and oxidative stress. Some routine laboratory investigations can predict the inflammatory response2. The study aimed to investigate the relationship between some preoperative serum biomarkers and postoperative delirium (POD).

Methods:

We included patients from the National Emergency Laparotomy Audit (NELA) database aged ≥65 years who had emergency laparotomies at Queen Elizabeth Hospital, Birmingham, UK, prospectively and retrospectively. Prospectively, we screened delirium five days postoperatively using mRASS, 4AT, AMT10, and CAM-ICU)3. Retrospectively, the clinical notes from 1 to 2018 to 1/2019 were scanned for keywords according to a validated chart abstraction method4. We applied the DSM-V criteria to diagnose POD. We documented the preoperative blood results, including haemoglobin, WBCs, neutrophil, lymphocyte, platelets, neutrophil-lymphocyte ratio (NLR), urea, creatinine, and lactate. Univariate and multivariate logistic regression analyses were performed.

Results:

Of 115 patients (mean age 76.0±7.0, 56% male), 30 (26.1%) patients developed POD. Table-1 shows high CRP, NLR, Platelet/Lymphocyte Ratio (PLR) were significantly related to POD. Figure-1 depicts that NLR had a significantly positive correlation with preoperative CRP, neutrophils, WBCs and PLR and a significantly negative correlation with Platelet/WBCs Ratio (PWR) and lymphocytic count, which are investigations requested in the routine practice. Predisposing factors as sepsis, high P-POSSUM morbidity and mortality scores, and NELA mortality score were significantly associated with POD. Multivariate logistics regression analysis showed preoperative low haemoglobin and sepsis were independent risk factors for POD. Hospital stay, critical care admission, and mortality rate were significantly higher in POD patients.

Conclusion:

High preoperative PLR and NLR values, (P-POSSUM) morbidity and NELA mortality scores are associated with a higher incidence of postoperative delirium. The preoperative inflammatory status can be linked to POD. NLR and PLR values could be good POD predictors.

References:

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3. Oh ES, et al. Delirium in Older Persons. JAMA 2017; 318:1161–74
4. Kuhn E, et al. Validation of a consensus method for identifying delirium from hospital records. PLoS ONE 2014; 9:7–13

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Variables	Total (n=115)	No delirium (n=85)	Delirium (n=30)	P-v
Demographic data				
Age (mean ±SD)	75.8±7.21	75.67±7.55	76.17±6.3	0
Sex (male: female)	56:59	46:39	10:20	0
Clinical data				
Sepsis	38(32.8%)	20 (23.3%)	18 (60%)	<0.
Critical care admission (%)	87(75.7%)	58(68.2%)	29(96.7%)	0.0
Mortality rate (%)	14(12.2%)	7(8.2%)	7(23.3%)	0
NELA mortality score	11.04±10.89	9.34±8.99	15.89±14.11	0.0
Laboratory data (Mean ± SD)				
C-Reactive Protein (CRP)	103.97±115.45	88.1±106.19	147.9±129.88	0.
Haemoglobin (Hb)	124.82±21.54	128.1±19.51	115.43±24.48	0.0
White Blood Cells (WBCs)	11.087±5.4	10.88±5.14	11.68±6.19	0
Neutrophil	9.038±5.47	8.8±4.87	9.76±5.53	0
Lymphocyte	1.094±0.66	1.15±0.67	0.94±0.63	0
Platelets	296.087±120.63	284.65±98.24	328.5±166.66	0
Platelet/WBCs Ratio (PWR)	33.19±22.13	31.54±17.34	37.84±32	0
Platelets/Lymphocyte Ratio (PLR)	415.03±436.35	364.83±379.14	557.27±551.16	0.0
Neutrophil/lymphocyte Ratio (NLR)	11.75±64.83	10.92±10.08	14.07±10.85	0.
Urea	14.48±64.83	15.79±75.34	10.76±7.8	0
Creatinine level	96.32±76.1	86.45±38.15	126.55±131.65	0
Lactate level	2.05±1.47	1.9±1.18	2.44±2.05	0

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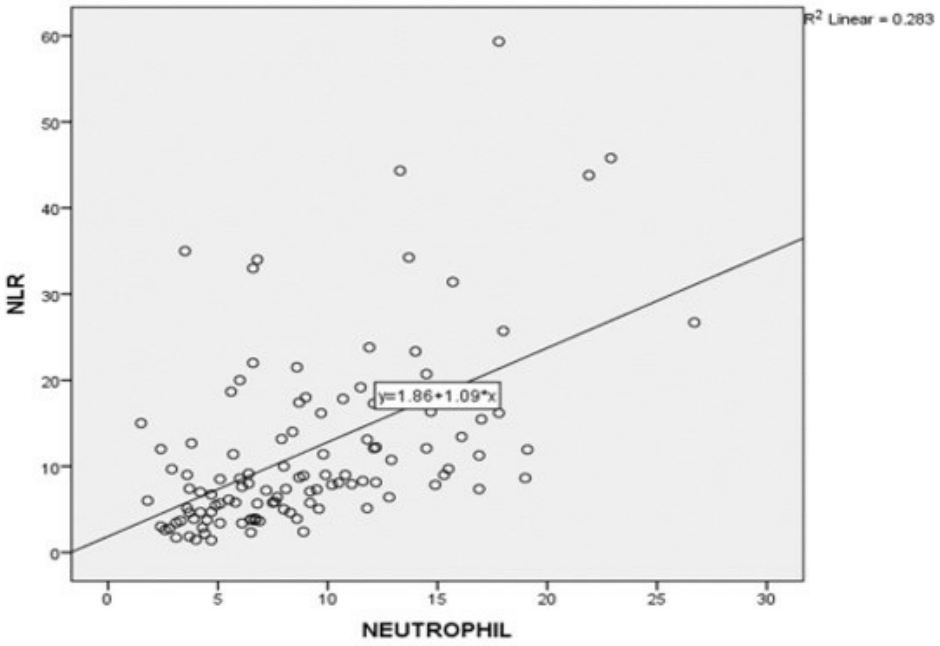

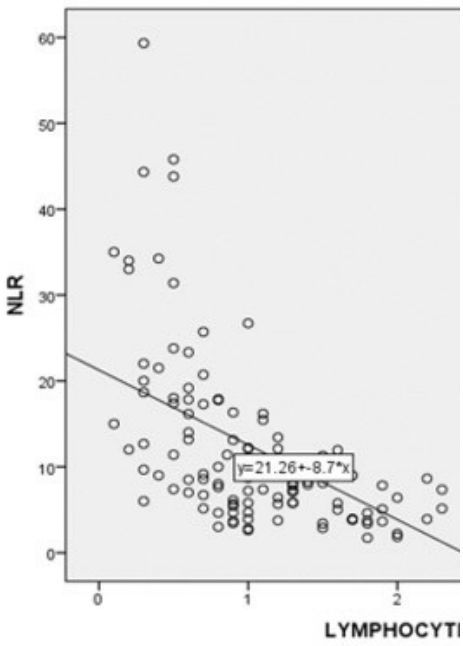

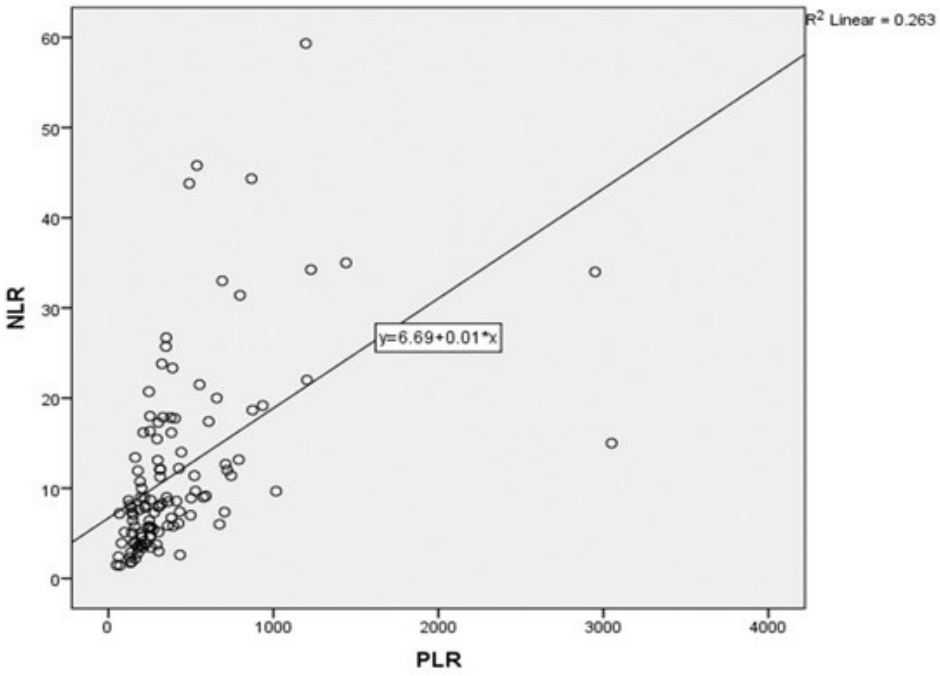

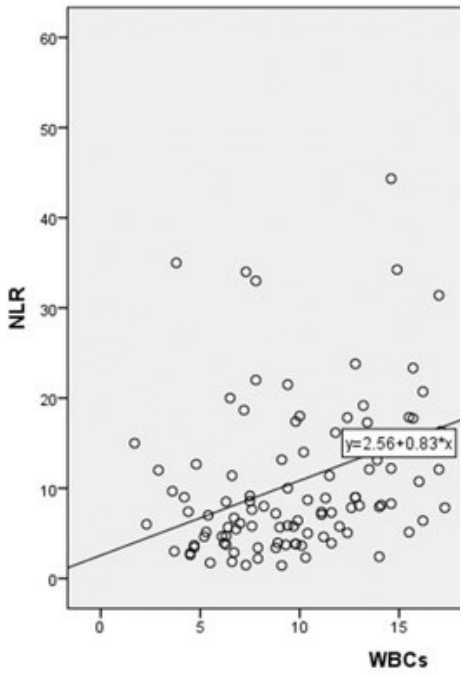

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Poster keywords

Delirium , Postoperative, NELA, Emergency Laparotomy, Biomarkers

55

Cardiorespiratory fitness levels in patients undergoing oral and/or maxillofacial cancer surgery: potential benefits of prehabilitation

Amy Dewar[1], Nicholas Tetlow[1,2], Bagrat Lalabekyan[3], Daniel Martin[2,4], Nicholas Kalavrezos[5], Ramani Moonesinghe[1,2,6], John Whittle[1,7], Robert Stephens[1,2]

[1]University College London Hospitals NHS Foundation Trust, Department of Anaesthesia and Perioperative Medicine, London, United Kingdom. [2]University College London, Division of Surgery and Interventional Science, London, United Kingdom. [3]King's College Hospital NHS Foundation Trust, Department of Anaesthetics, London, United Kingdom. [4]University of Plymouth, Peninsula Medical School, Plymouth, United Kingdom. [5]University College London Hospitals NHS Foundation Trust, Center for Reconstructive Surgery, London, United Kingdom. [6]University College London NHS Foundation Trust, Surgical Outcomes Research Centre, London, United Kingdom. [7]University College London, Department of Targeted Intervention, Centre for Perioperative Medicine, London, United Kingdom

Abstract

INTRODUCTION

Objectively measured aerobic fitness using preoperative Cardio-Pulmonary Exercise Testing (pCPET) in patients undergoing oral and/or maxillofacial cancer surgery (OMFS) can identify individuals at increased risk of postoperative morbidity(1). Early identification and optimization of this high-risk subgroup through multimodal prehabilitation may improve patient outcomes and reduce associated healthcare costs. We assessed our local CPET database to identify patients' average fitness, number of at-risk individuals and the potential impact of an exercise prehabilitation programme.

METHODS

We retrospectively reviewed pCPET data from December 2019 to June 2021 for patients referred during their routine OMFS pre-assessment. We used the cut-off for the prediction of morbidity of VO_2 at anaerobic threshold (AT) <10.1ml/kg/min and VO_{2peak} <12.3ml/kg/min, based on our local data which has been shown to predict morbidity and resource use(1). Haemoglobin concentration [Hb] and Body Mass Index (BMI) were also recorded, as low [Hb] and BMI are associated with increased postoperative morbidity(2,3).

RESULTS

One-hundred and nine patients were referred for pCPET: 2 were unable to perform CPET and 1 test was submaximal in nature (no AT was achieved). Table 1 presents demographic and pCPET data. Fifty-three patients (50%) had an AT <10.1ml/kg/min and 16 (15%) had a VO_{2peak} <12.3ml/kg/min. Six patients (6%) were underweight (BMI <18.5kg/m^2) and 30 (28%) were obese (BMI >30 kg/m^2). Twenty-six males (38%) had [Hb] <130g/l and 11 females (29%) had [Hb] <120g/l. Increasing aerobic fitness (Figure 1) by 1 ml/kg/min for AT and VO_{2peak} would re-classify 14 patients (26%) and 6 patients (38%) from high-risk to low-risk, respectively.

CONCLUSION

Our data shows a large number of OMFS patients with pCPET values associated with increased morbidity. Implementation of exercise prehabilitation may reduce the number of at-risk patients. Future

prehabilitation studies should assess feasibility and impact on outcomes in this cohort.

REFERENCES

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Table 1. Demographic and pCPET data described as median (IQR), frequency
(±SD) as appropriate.

Variable	Unable to perform CPET	Performe
No (%)	2 (2%)	107 (98
Age (years)	71 (±22)	58 (±1
Gender		
Male	1 (<1%)	69 (64
Body Mass Index (kg/m^2)	27.7 (±3.2)	26.7 (22.5
VO_2 at AT (ml/kg/min)	-	10.1 (8.5-
V_E/VCO_2 at AT	-	32 (±
Peak VO_2 (ml/kg/min)	-	17.1 (13.6
Peak work-rate (Watts)	-	116 (75-
Metabolic Equivalent of Task	-	5.2 (4.3-
Haemoglobin (g/l)		
Male	140	136 (±
Female	126	125 (±

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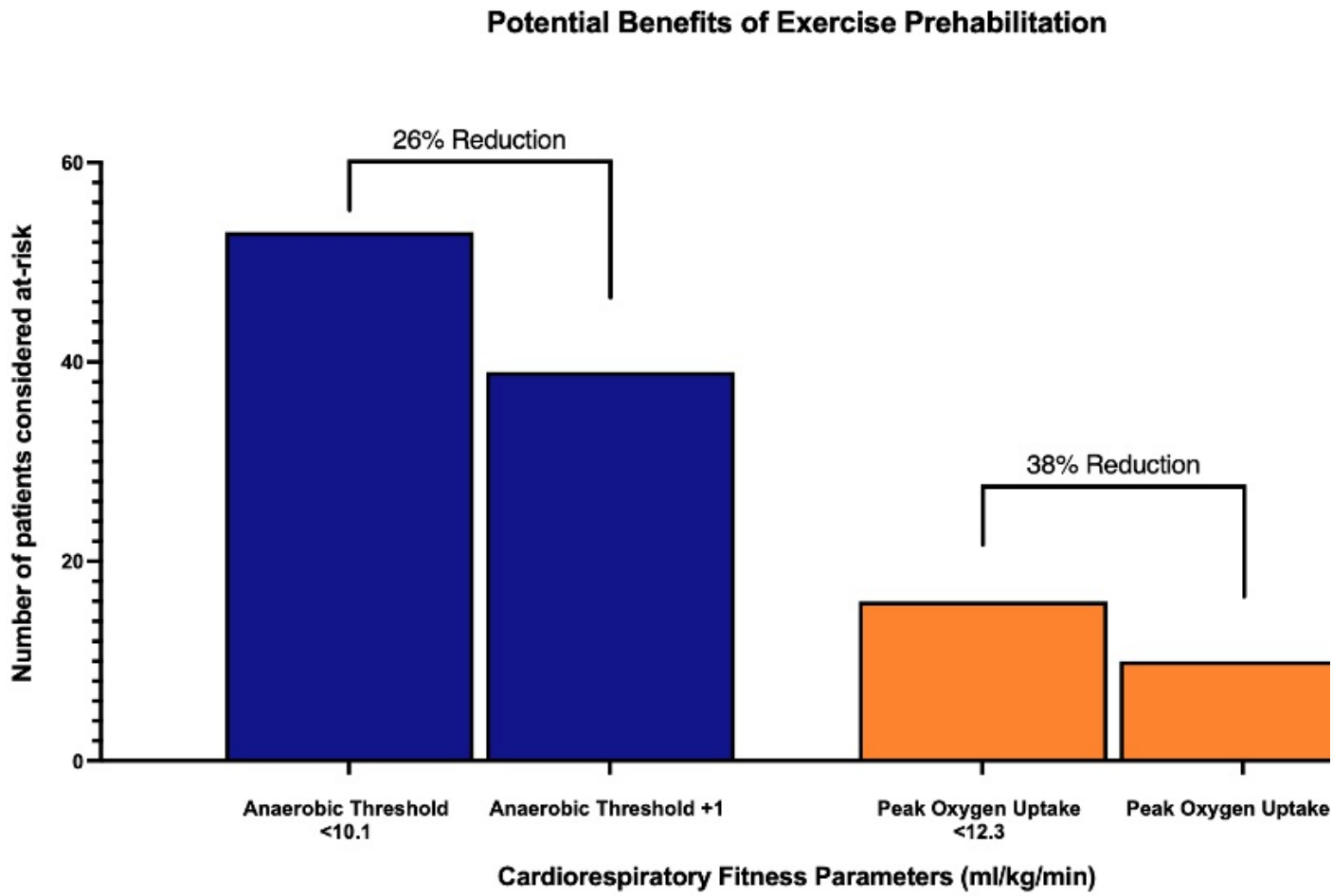

Figure 1. Potential impact of exercise prehabilitation with an increase of 1m anaerobic threshold and peak oxygen uptake.

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Poster keywords

CPET, At-risk, Prehabilitation, OMFS, Aerobic fitness

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Preventing Post-Operative Atrial Fibrillation (POAF) in Cardiac Surgery Patients

Sinead Egan, Coilin Collins-Smyth, Shruti Chitnis, Gurdip Bhatti, Alison Chiu, Sean McLean
Vancouver General Hospital, Vancouver, Canada

Abstract

Introduction:

Post-operative atrial fibrillation (POAF) affects as many as 20-50% of post-operative cardiac surgery patients. POAF has been associated with prolonged hospital stay, an increased likelihood of developing permanent atrial fibrillation and increased long term mortality. POAF prophylaxis has been well studied but remains underused in the clinical setting[1]. The perioperative use of oral beta blockers for the prevention of atrial fibrillation post cardiac surgery is a Class I recommendation as per the Society of Cardiovascular Anesthesiologists and the European Association of Cardiothoracic Anaesthetists (SCA/EACTA) [2]. They also make a Class IIa recommendation for the consideration of perioperative amiodarone in high-risk patients.

Methods:

A Quality Improvement study was undertaken with the aim of improving POAF prevention in Vancouver General Hospital (VGH). VGH is the largest tertiary referral centre in British Columbia and performs a wide variety of cardiac surgeries, excluding heart transplant.

The study involved developing a POAF risk stratification score and implementing a pre-printed prescribing guide for prophylactic amiodarone and beta-blocker use for all patients undergoing cardiac surgery (appendix 1). The prescribing guide was developed with the collaboration of Cardiac Anaesthesia, Cardiac Surgery, Nursing and Pharmacy Departments. A bedside checklist was adopted and with additional nurse education in atrial fibrillation prophylaxis the study aimed to increase post-operative day one beta-blocker use (appendix 2).

Results:

Over 400 patients have been audited over the course of the study and initial results show the incidence of new post-operative atrial fibrillation has decreased from 24% to 15% in the Cardiac Surgery Intensive Care Unit (CSICU) population. Prophylactic amiodarone was commenced in over 20% of eligible patients. Beta-blocker prophylaxis was commenced in 40% of patients within 24 hours of admission to CSICU. The main rationale for withholding beta-blocker therapy within 24 hours of admission are vasopressor/inotrope dependence or bradycardia.

Conclusion:

This Quality Improvement study has demonstrated a reduction in the incidence of POAF. The reduction was achieved through a combination of measures including improved risk identification, the development and implementation of a prescribing guide, implementing a post-operative bedside checklist and increased nurse education.

Reference(s):

- Helgadottir S, Sigurdsson MI, Ingvarsdottir IL, Arnar DO, Gudbjartsson T. Atrial fibrillation following

cardiac surgery: risk analysis and long-term survival. J Cardiothorac Surg. 2012 Sep 19;7:87. doi: 10.1186/1749-8090-7-87. PMID: 22992266; PMCID: PMC3515503.

- Muehlschlegel JD, Burrage PS, Ngai JY, Prutkin JM, Huang CC, Xu X, Chae SH, Bollen BA, Piccini JP, Schwann NM, Mahajan A, Ruel M, Body SC, Sellke FW, Mathew J, O'Brien B. Society of Cardiovascular Anesthesiologists/European Association of Cardiothoracic Anaesthetists Practice Advisory for the Management of Perioperative Atrial Fibrillation in Patients Undergoing Cardiac Surgery. Anesth Analg. 2019 Jan;128(1):33-42. doi: 10.1213/ANE.0000000000003865. PMID: 30550473.

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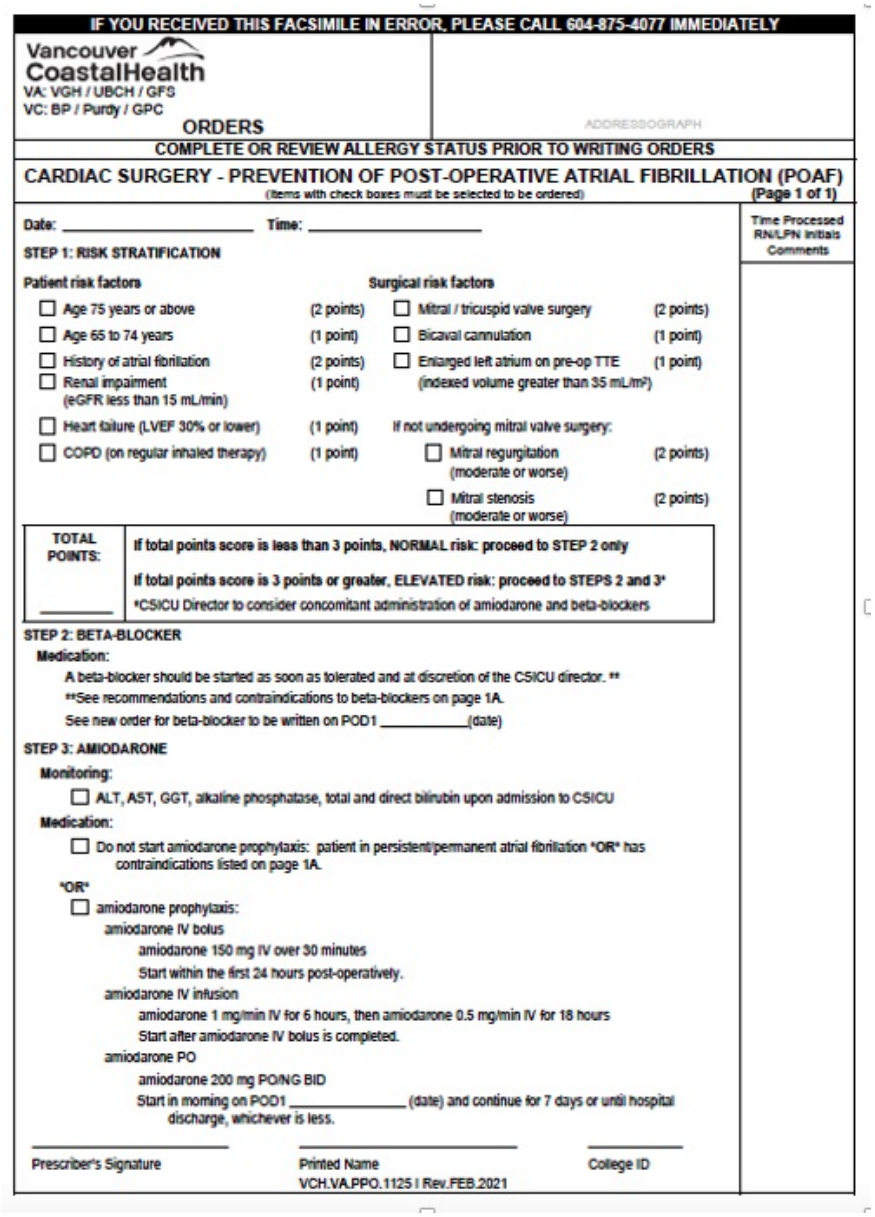

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ADDRESSOGRAPH

COMPLETE OR REVIEW ALLERGY STATUS PRIOR TO WRITING ORDERS

CARDIAC SURGERY - PREVENTION OF POST-OPERATIVE ATRIAL FIBRILLATION (POAF)
(Items with check boxes must be selected to be ordered) (Page 1 of 1)

Date: _____ Time: _____

Time Processed
RN/LPN Initials
Comments

STEP 1: RISK STRATIFICATION

Patient risk factors

- ☐ Age 75 years or above (2 points)
- ☐ Age 65 to 74 years (1 point)
- ☐ History of atrial fibrillation (2 points)
- ☐ Renal impairment (eGFR less than 15 mL/min) (1 point)
- ☐ Heart failure (LVEF 30% or lower) (1 point)
- ☐ COPD (on regular inhaled therapy) (1 point)

Surgical risk factors

- ☐ Mitral / tricuspid valve surgery (2 points)
- ☐ Bicaval cannulation (1 point)
- ☐ Enlarged left atrium on pre-op TTE (1 point) (indexed volume greater than 35 mL/m²)

If not undergoing mitral valve surgery:

- ☐ Mitral regurgitation (moderate or worse) (2 points)
- ☐ Mitral stenosis (moderate or worse) (2 points)

TOTAL POINTS: _____	If total points score is less than 3 points, NORMAL risk: proceed to STEP 2 only If total points score is 3 points or greater, ELEVATED risk: proceed to STEPS 2 and 3* *CSICU Director to consider concomitant administration of amiodarone and beta-blockers

STEP 2: BETA-BLOCKER

Medication:

A beta-blocker should be started as soon as tolerated and at discretion of the CSICU director. **
**See recommendations and contraindications to beta-blockers on page 1A.
See new order for beta-blocker to be written on POD1 _____(date)

STEP 3: AMIODARONE

Monitoring:

- ☐ ALT, AST, GGT, alkaline phosphatase, total and direct bilirubin upon admission to CSICU

Medication:

- ☐ Do not start amiodarone prophylaxis: patient in persistent/permanent atrial fibrillation *OR* has contraindications listed on page 1A.

OR

- ☐ amiodarone prophylaxis:
  - amiodarone IV bolus
    - amiodarone 150 mg IV over 30 minutes
    - Start within the first 24 hours post-operatively.
  - amiodarone IV infusion
    - amiodarone 1 mg/min IV for 6 hours, then amiodarone 0.5 mg/min IV for 18 hours
    - Start after amiodarone IV bolus is completed.
  - amiodarone PO
    - amiodarone 200 mg PO/NG BID
    - Start in morning on POD1 _____ (date) and continue for 7 days or until hospital discharge, whichever is less.

Prescriber's Signature | Printed Name | College ID

VCH.VA.PPO.1125 | Rev.FEB.2021

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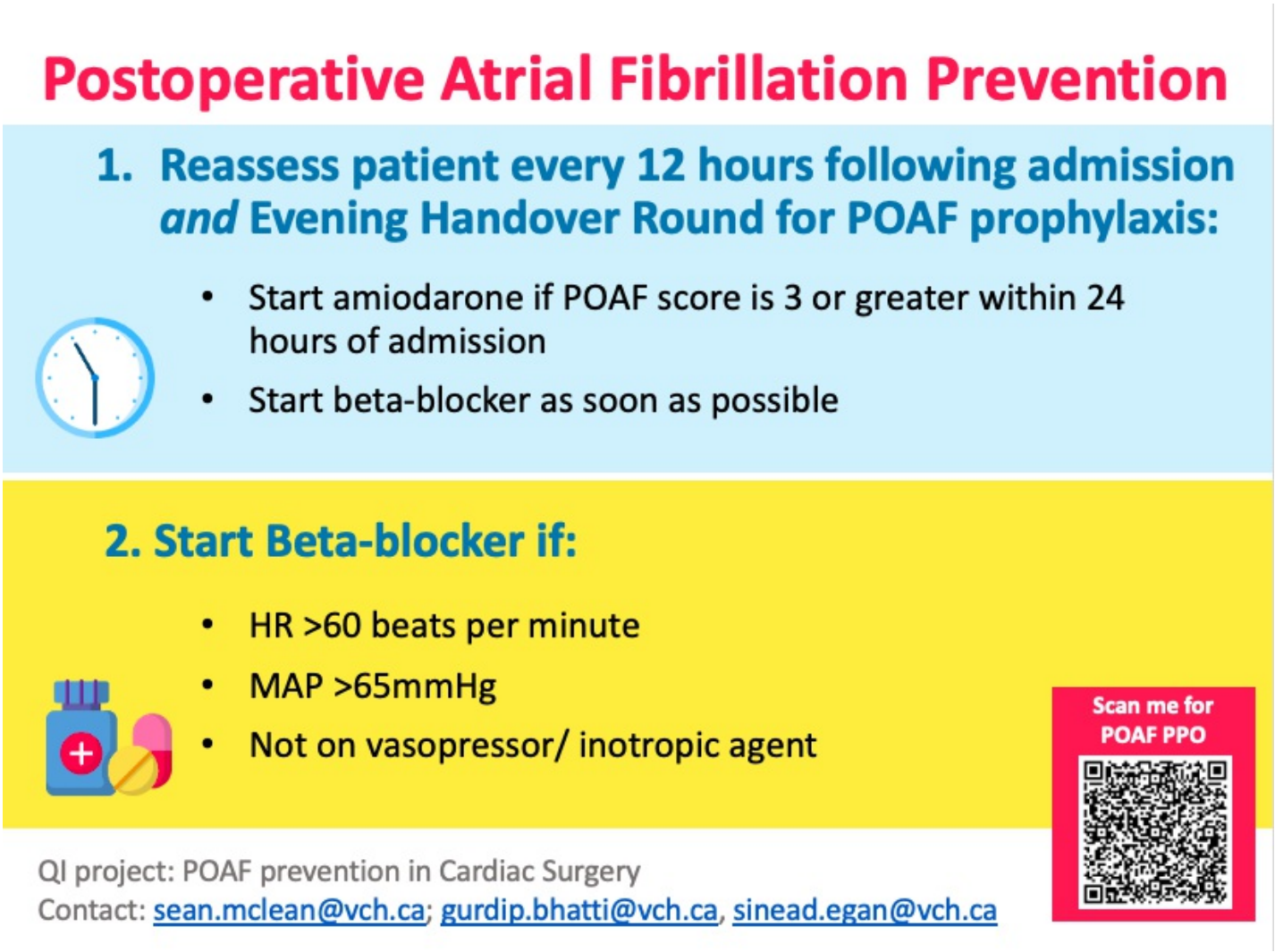

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Poster keywords

Atrial Fibrillation, Preoperative prevention

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Prehabilitation: how to implement a common-sense idea

Louise MacKenzie, Isla Veal, Zainab Noor, Rebecca Bradshaw, Sophie Legg, Minahi Ilyas, Ray Cuffe, Alexis Schizas, Alison Hainsworth, Pele Banugo, Aoife Hegarty, Heena Bidd
Guy's and St Thomas', London, United Kingdom

Abstract

Introduction:

Prehabilitation has become an increasingly popular concept, as endorsed by RCoA, NIHR and Macmillan[1], but is often difficult to introduce. The idea has been adopted in many ways at different institutions, with little conclusive data on the optimal implementation strategy.

Methods:

We established a prehabilitation project for colorectal patients having cancer surgery. Funding was obtained from Guy's and St Thomas' Charitable Fund and South-East London Cancer Alliance (SELCA): providing the service with appropriate personnel and equipment for patients e.g. Powerbreathe respiratory muscle trainers and FitBit watches.

All patients are seen face-to-face in a one-stop clinic where they are stratified into standard, modified and high-risk groups, and prescribed a multimodal, individualised plan involving physiotherapy, dietietics and psychology.

Table 1

Baseline and post programme functional assessments are completed including grip strength and physical fitness parameters (sit to stands, maximum inspiratory pressures, basic spirometry), as well as patient reported outcome questionnaires examining fatigue (FACIT-F), self-efficacy, quality of life (EORTIC), physical activity (IPAQ) and anxiety/depression screening tools (HADS). We aim for a minimum programme duration of 21 days prior to surgery. Surgical outcomes including complication rate, length of stay and readmission rate are also collected.

Results:

49 patients have now attended prehab clinic, with a mean time of 21.1 days in the prehab programme prior to their surgery date. Early data analysis is yet to show any change in complication rate or length of stay, although it is difficult to gain any meaningful statistical value given the limited numbers involved.

Table 2

Conclusions

Obtaining funding for a new service requires evidence of benefit, but the nature of prehabilitation makes this a difficult due to the vast number of outcomes and variables. In order to objectively prove a statistical benefit from prehab, there would need to be a standardised multi-centre protocol for a randomised control trial, and this would be extremely challenging to implement. One of the strengths of

prehab is the improvement of patient experience via a multidisciplinary support team, and we should remember all factors that contribute to this e.g. support, reassurance and familiarity, as well as objective outcomes such as length of stay.

References

1. Macmillan Cancer Support, Royal College of Anaesthetists, National Institute for Health Research. *Prehabilitation for People with Cancer*. 2019. Available from https://be.macmillan.org.uk/be/p-25112-prehabilitation-for-people-with-cancer.aspx

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	Interven
Physiotherapy	Respiratory muscle training, persona physical activity advice.
Dietetics	Dietetic support and advice, oral/art required.
Psychology	Initial assessment, with focus on pre admission and recovery post dischar levels of distress were followed up s

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Examples of patient feedback
“Prehab is a fantastic idea. None of my friends were ever
“Gave me more confidence in going forward for surgery.”
“Very useful. I have never felt more prepared for surgery.
“Really pleased that I attended the appointment and I wa this support was there for me.”
“The support has been unbelievable.”

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Poster keywords

Prehab, Perioperative , Service improvement, Prehabilitation, Challenges

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Evaluating Acute Pain Disparities in Rural Illinois

Marc Koch, MD, MBA, FASA, Sutton Murray, MS, Shelly Sharma, MD, MPH, Crystal Richardson
Somnia, Inc., Harrison, NY, USA

Abstract

Introduction

With increased emphasis on opioid minimization strategies and improved perioperative outcomes related to pain management, there is increased demand for ultrasound guided regional anesthesia. The adductor canal block is one of the preferred methods of analgesia in total knee arthroplasty, a frequently performed procedure in rural Illinois. Frequently this block is utilized in place of the femoral nerve block to reduce patient falls. It also provides adequate pain control while simultaneously improving pain management strategies and perioperative outcomes. We aimed to evaluate patients undergoing total knee arthroplasty in 2020 at this location to check for disparities in acute pain care based on demographic factors and hypothesized that there would be no significant differences in access across said groups.

Methods:

From January 1st through December 31st of 2020, we evaluated retrospective data, specifically demographic characteristics of 739 total knee arthroplasties performed at this location. Of those, 589 (79.7%) received an adductor canal block or femoral nerve block, 72 (20.3%) received no nerve block, and 78 patients were eliminated due to missing demographic data. We evaluated the differences in our patient groups with a T-test and hypothesized that demographic characteristics of patients do not affect the type nor quality of treatment a patient receives.

Results:

With respect to Black/African American and Hispanic, Latin(a/o), & Latinx patients, there appeared to be no statistically significant disparities in acute pain care for patients undergoing TKA. For all factors, the p-value was greater than 0.05, and we accept the null hypothesis that there is no significant difference between the means and conclude that a significant difference does not exist. However, female patients were less likely than their male counterparts to receive a nerve block. Older patients (>65) appeared to favor TKA without nerve blocks, whereas younger patients favored nerve blocks for TKA.

Conclusion:

Male patients were more likely to receive acute pain interventions for TKA, as were Black and Hispanic patients, and those under the age of 65. This raises the question about acute pain care for patients older than 65 or identify as female, and the perioperative discussion(s) held regarding acute pain management strategies prior to surgery.

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Figure 1: Breakdown of Demographics by Treatment Group

		TKA with Adductor or Femoral	TKA without Block	*P value*
Number of Patients (N)		589	72	
Gender	Female	54.07%	60.56%	0.31*
	Male	45.93%	39.44%	
Race	Black or African American	1.38%	0.0%	0.55*
	Hispanic, Latin(a/o), & Latinx	1.79%	0.0%	
	White	96.83%	90.1%	
	Other	0.0%	9.9%	
Age (Bucket)	0-18	1.38%	0.0%	0.45**
	19-65	46.21%	35.2%	
	> 65	52.41%	64.8%	

**Chi square, chi Stat IS NOT > Chi Crit, so we ACCEPT H0 the result is not significant at p < .05*
***T-test done using numeric age value, not groups. The result is not significant at p < .05*

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Poster keywords

Pain, Acute Pain, Disparities, Outcomes, Opioid

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Assessment of the quality of information for mothers about Analgesia and Anaesthesia for labour

Mohamed Abdelsalam, Suzy Bell, Mohamed Elmi, Adam Anad
The Princess Alexandra Hospital NHS Trust, Harlow, Essex, United Kingdom

Abstract

Introduction

The antenatal period is a stressful time by default for every mother and the pain during delivery is one of many concerns for mothers before their due dates, however, there are many varieties of pain relief that could be provided in labour ward. Empowering women to make informed decisions about analgesia and anaesthesia during their delivery, mothers are being given a lot of information from different healthcare professionals and other sources. There is a large amount of information in the public domain (especially on the internet) with varying quality, no quality assurance and not all written by professionals or evidence based. In addition, not all the women present to labour ward are English speakers, which could affect the quality of received information.

We aimed to investigate the antenatal sources of information about labour analgesia and its quality rating, and to ascertain the impact of language barrier. Moreover, we aimed to identify the spread of the labour analgesia self-explanatory information leaflet in labour ward upon mothers' admission.

Methods

Data were collected anonymously over 4 weeks via a self-explanatory questionnaire from mothers in the post-natal care ward within 2 days of the delivery.

Results

A total of 36 mothers, 4 were non-English speakers. The midwifery and the antenatal phone application were reported as sources of information by 23 and 9 times respectively, with an overall rating of Good. Only 44% of the participated mothers mentioned that they received labour analgesia self-explanatory information leaflet upon admission to labour ward.
Around 1 in 4 mothers considered the advice and guidance about the potential complications of the neuraxial blocks are not sufficient. However, the overall rating of the quality of information about labour analgesia received in labour ward was Outstanding and Good by 36% equivocally.

Conclusion

The midwifery antenatal care is still the main input of information for labour analgesia, however, the antenatal mobile application, which is the recommended source, was not used frequently as expected. There was inconsistent distribution of the labour ward self-explanatory information leaflets in labour ward. In addition, language barrier does exist for non-English speakers, which affects their decision-making ability or awareness about the potential complications of the labour analgesia or anaesthesia.

Reference

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- National Maternity Review, *BETTER BIRTHS: Improving outcomes of maternity services in England; A Five-Year Forward View for maternity care,* August 2017.
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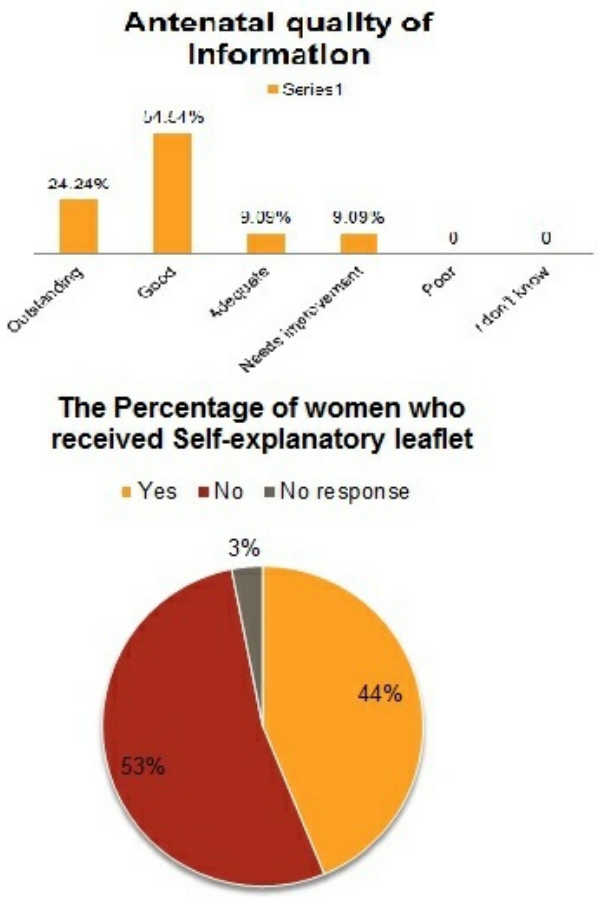

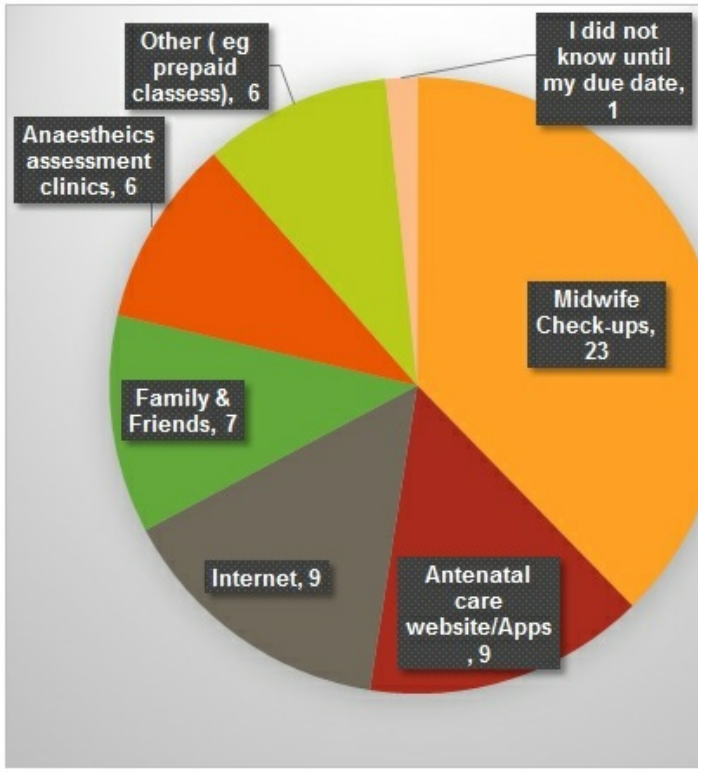

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Poster keywords

Obstetric, Analgesia, Information, Quality, Pain

60

Lung Biopsy Audit

Ahmed Mattar, Audrina Daadipour, Ahmed Taha
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Abstract

Aim:

To review and check the outcomes of CT guided percutaneous lung lesion biopsies over three years (2019, 2020, 2021)

Methodology:

Inclusion criteria:

Patients with suspected lung cancer reviewed at MDM who underwent percutaneous lung lesion biopsy with breach of the pleura at King's College Hospital between 2018 and 2020

Imaging was acquired using the Siemens SOMATOM Sensation 16 CT Scanner, and all procedures were performed using the Temno Evolution 18G Coaxial Biopsy Needle.

All patients were monitored for at least four hours following the procedure with a chest radiograph performed and reported by a radiologist after 4 hours.

Study methods: Computerised Radiology Integrated System (CRIS) was used to identify all commenced cases of CT guided lung biopsy. Cases meeting the inclusion criteria were selected. The cases were reviewed on PACS and electronic patient records (EPR). Outcomes and complications within 30 days of the procedure were recorded.

Results:

132 cases met the inclusion criteria. Clinically significant pneumothorax was observed in 15% of patients.(20 patients)

Overall, 7% of patients required admission due to complications (9 patients for pneumothorax management)

1% of patients required intervention (chest drain insertion).

Conclusion:

CT guided percutaneous lung lesion biopsy is a safe procedure.

Although minor pneumothorax and pulmonary haemorrhage are common, only 5.6% of patients required treatment. This compares with the RCR and BTS guidelines

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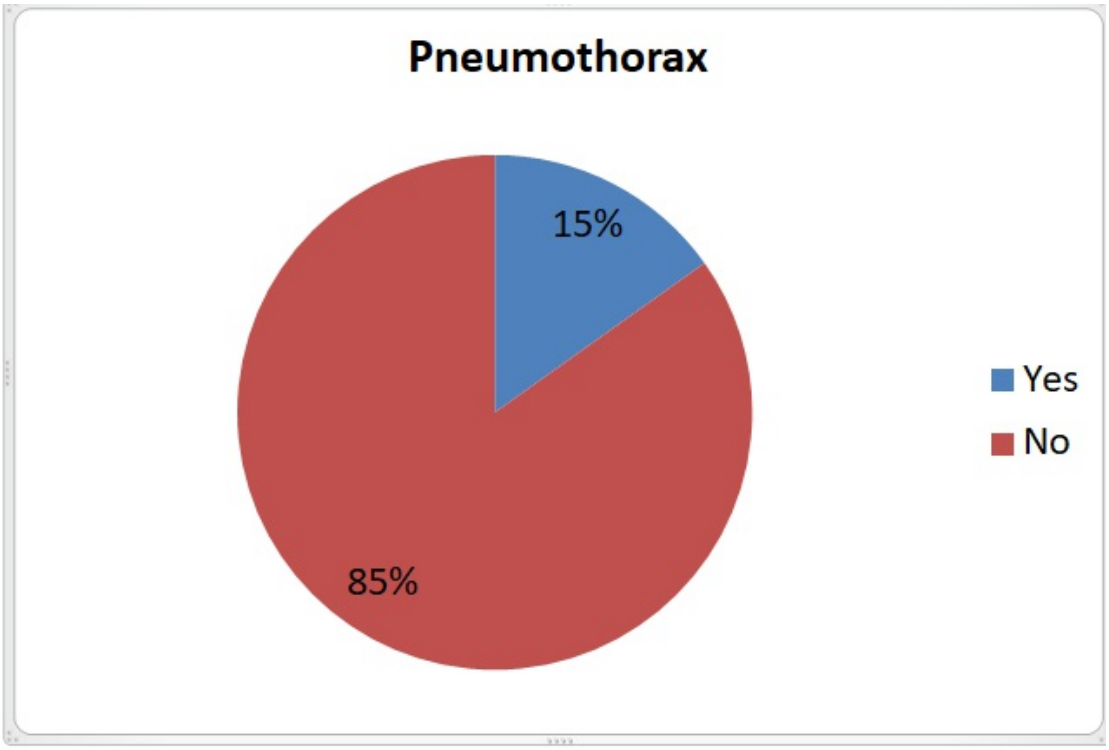

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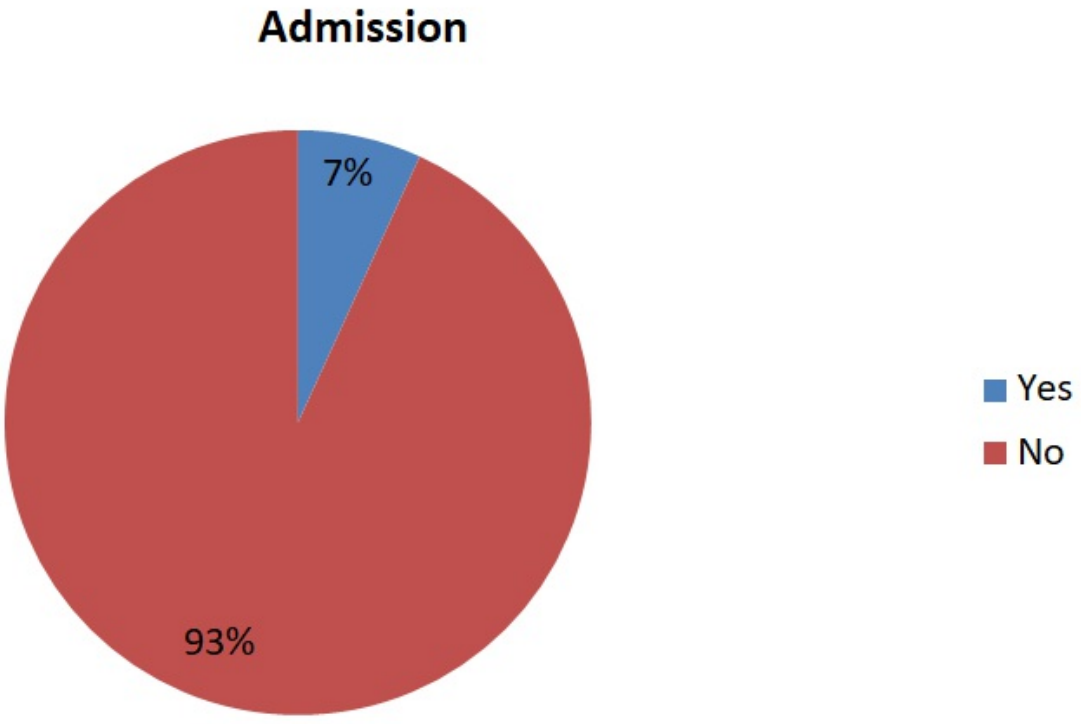

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Poster keywords

lung, biopsy, pneumothorax, CT guided, complications

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Patient reported outcomes for management tubular fractures of the hand during coronavirus pandemic: A single-centre study via inter-rater agreement

Djamila Rojoa, Firas Raheman, Lucy Cutler, Christopher Macdonald
Leicester Royal Infirmary, Leicester, United Kingdom

Abstract

Introduction:

Management of hand trauma has evolved to incorporate assessment, treatment and rehabilitation of patients in a ‘one-stop’ clinic on initial presentation. Our aim was to evaluate the effect of COVID-19 on hand trauma management using inter-rater agreement between hand surgeons.

Methodology:

Patients with hand fractures were consecutively assessed from March to May 2020. Two experienced hand surgeons blinded to management and outcomes independently reviewed radiographic images and relevant clinical history to provide their opinion on optimal treatment. Weighted-kappa analysis was performed to determine concordance and inter-rater agreement between the two surgeons and actual management.

Results:

268 patients were identified, 82 had fractures involving tubular bones of the hand. 62 were male and 20 were female. Mean age was 40.3 (SD 19.7). Mechanism of injury was secondary to home-related injuries (34%) and falls (28%). Fractures involving the metacarpals (n=24) and distal phalanx (n=20) were most commonly seen. 35 patients underwent surgery whereas 47 were managed conservatively. Overall agreement between actual management and both consultant-1 and consultant-2 was moderate ($\kappa=0.55$, $p<0.0001$ and $\kappa=0.63$, $p<0.0001$, respectively). Subgroup analysis showed a weak agreement between actual management of metacarpal fractures and both consultant-1 and consultant-2 ($\kappa=0.22$, $p=0.29$ and $\kappa=0.47$, $p=0.02$, respectively). Inter-rater agreement was substantial for management of metacarpal fractures ($\kappa=0.73$, $p<0.0001$), but weak for distal phalanx fractures ($\kappa=0.29$, $p=0.03$). 30 responses were obtained at 6 months follow-up which showed no difference in functional outcome as mean quick-DASH scores were similar for conservatively and operatively managed patients ($p=0.05$).

Conclusion:

Our study has shown that overall management of hand fractures remained optimized throughout the pandemic. However, lack of concordance was observed in the management of metacarpals through substantial inter-rater agreement but overall poor agreement. Despite this disagreement, satisfactory functional outcomes were observed for patients treated during this ongoing crisis.

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Poster keywords

COVID, hand trauma, one-stop clinic, tubular fractures, patient care

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The use of cone-beam computed tomography (CBCT) arthroscopy for the diagnosis of ligamentous injuries of the wrist - A diagnostic accuracy meta-analysis

Djamila Rojoa, Nicholas Cereceda-Monteoliva, FIras Raheman
Leicester Royal Infirmary, Leicester, United Kingdom

Abstract

Aim:

Scapholunate ligament (SLL) injuries can lead to scapholunate collapse and wrist arthritis if misdiagnosed. The challenge is in diagnosing clinically suspected partial SLL tears, with the absence of dynamic instability on radiographs. The aim of our study was to evaluate the accuracy of Cone-beam CT (CBCT) arthrography in diagnosing SLL injuries.

Methodology:

A systematic review was conducted in compliance with Preferred Reporting Items for a Systematic Review and Meta-analysis (PRISMA). A search strategy identifying relevant studies was performed using Healthcare Database Advanced Search (HDAS). A mixed-effects logistic regression bivariate model was used to estimate summary sensitivity and specificity. Area under the curve (AUC) and hierarchical summary receiver operating characteristic (HSROC) curves were constructed to determine diagnostic accuracy.

Results:

We identified 5 studies assessing the accuracy of CBCT arthrography against wrist arthrography, MRI or intraoperative findings as reference standard. A total of 140 patients were included. The pooled estimates for sensitivity and specificity of CBCT arthrography in diagnosing SLL tears were 82.2% (95%CI 42.0-96.7) and 91.8% (95%CI 84.3-95.9), respectively. The AUC was 0.92 (0.89-0.94), showing an excellent diagnostic accuracy of CBCT arthrography in SLL injuries. CBCT arthrography had an estimated mean radiation dose of 3.2 mSv.

Conclusion:

Our study confirms that CBCT arthroscopy has an excellent diagnostic accuracy for SLL tears. It has a comparably high sensitivity to conventional arthrography and a better specificity. Whilst MSCT and MRI are still reliable options to confirm SLL tears, their accuracy often needs to be enhanced by arthrography. CBCT is an alternative diagnostic modality, with reduced mean radiation doses and may provide additional information on cartilage and cortical injuries. There is a need for further studies with more robust methodology before implementation of CBCT arthrography in current practice, however our

analysis shows that it is a reliable option and has a promising future.

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Poster keywords

Scapholunate ligament, arthritis, CBCT, diagnostic, study

63

The use of cone-beam computed tomography (CBCT) in the diagnosis of scaphoid fractures of the hand - A diagnostic accuracy meta-analysis

Djamila Rojoa, Vivek Sharma, Emma Fitzpatrick, Firas Raheman, Harvinder Singh
Leicester Royal Infirmary, Leicester, United Kingdom

Abstract

Aims: Non-displaced scaphoid fractures often represent a diagnostic challenge to the emergency department. Due to its retrograde blood supply, missed fractures may lead to avascular necrosis, arthritis and instability, affecting the patient's hand function and quality of life. Cone Beam CT (CBCT) scan is a novel scan, with reduced radiation exposure, and comparatively fast acquisition time. We aimed to evaluate the diagnostic accuracy of CBCT in the occult scaphoid fractures.

Methods: A systematic search using the Healthcare Databases Advanced Search interface was conducted using a list of search strategy key words to identify all studies assessing the use of CBCT for diagnosis of scaphoid fractures. A meta-analysis was conducted using a mixed effects logistic regression bivariate model. Inter-observer agreements for CBCT were meta-analysed using a mixed-effects model through calculated standard errors from the reported agreement coefficients.

Results: Five studies were identified, assessing a total of 439 patients. Four studies used clinical follow-up reports as reference standard, one used magnetic resonance imaging. The pooled estimates for sensitivity and specificity for CBCT identification of scaphoid fractures 87.7% (95%CI 77.6-93.6) and 99.2% (95%CI 92.6-99.9) respectively.

Conclusions: Our study has shown that CBCT is an accurate tool for diagnosis of occult scaphoid fractures. It is efficient, cost-effective, and allows diagnosis of scaphoid fractures at the point of presentation. This limits unnecessary immobilisation and follow-ups required, thus reducing the healthcare burden. Further studies are required for CBCT to be used in the acute radiocarpal fracture diagnostic algorithm.

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Poster keywords

scaphoid fractures, Cone Beam CT, meta-analysis, diagnostic

65

Zooming to success: preparing trainees for the primary FRCA OSCE/SOE using an online simulation course

Kunal Joshi[1], Arun Menon[2], Kirsty House[3], Matthew Simpson[3]
[1]Royal Marsden Hospital, London, United Kingdom. [2]University College London Hospital, London, United Kingdom. [3]Lister Hospital, Stevenage, United Kingdom

Abstract

Introduction

Due to the COVID-19 pandemic, the Royal College of Anaesthetists (RCoA) changed all non-written exams (OSCE and SOE) to an online format[1]. For several years we have run a simulation-type course to prepare candidates for the primary FRCA. We aimed to simulate the online exam experience as closely as possible whilst minimising the risk of technological failure.

Methods

In October 2020 we ran a course for 11 candidates. Each created a Zoom meeting in advance. Faculty attended the course venue in person, while candidates were remote. For the OSCE, each candidate was paired with a 'buddy examiner' via a Zoom meeting. The buddy then visited each OSCE station examiner in turn to allow candidate and examiner to interact. Unmanned stations were displayed using the 'share screen' function.

In January 2021, we ran a course for 12 candidates with examiners also remote. Each candidate created a personal Zoom meeting, and a link was shared with examiners. A grid specified which candidates examiners should expect when. Per the RCoA's format [2], each OSCE station was ten minutes long, five minutes of examination and five minutes for changeover and briefing. This time we used WhatsApp to share information for unmanned stations. On both courses, four SOEs were conducted in the afternoon over Zoom. Post course feedback was gathered from candidates and faculty using SurveyMonkey (SVMK Inc., free version). All meetings used Zoom (Zoom Cloud Meeting, free version).

Results

The courses were conducted with few technical glitches (in January, one candidate had to retake three OSCE stations at the end due to connectivity problems). Feedback from candidates was overwhelmingly positive (figure 1). A clear majority felt that they received adequate pre-course information and briefing on the day. 95.5% of the candidates agreed that the course format and logistics worked well. All candidates felt their exam technique improved.

Conclusions

We showed that running an online OSCE and SOE course for the primary FRCA is feasible using free to access software. We believe our methods can be used by others. It is important not to underestimate the advanced planning and coordination needed to deliver this successfully.

References

1. Royal College of Anaesthetists (RCOA) 2020, HOW TO - take your Primary OSCE/SOE in Practique, accessed December 2020, <https://www.rcoa.ac.uk/sites/default/files/documents/2020-11/PRIMARY%20Candidate%20Guide%20to%20taking%20your%20OSCE%20SOE%20in%20Practique.pdf>

2. Royal College of Anaesthetists (RCOA) 2020, Summary of changes to the delivery of FRCA OSCE and SOE, accessed December 2020, <https://www.rcoa.ac.uk/documents/taking-osce-soe-online-

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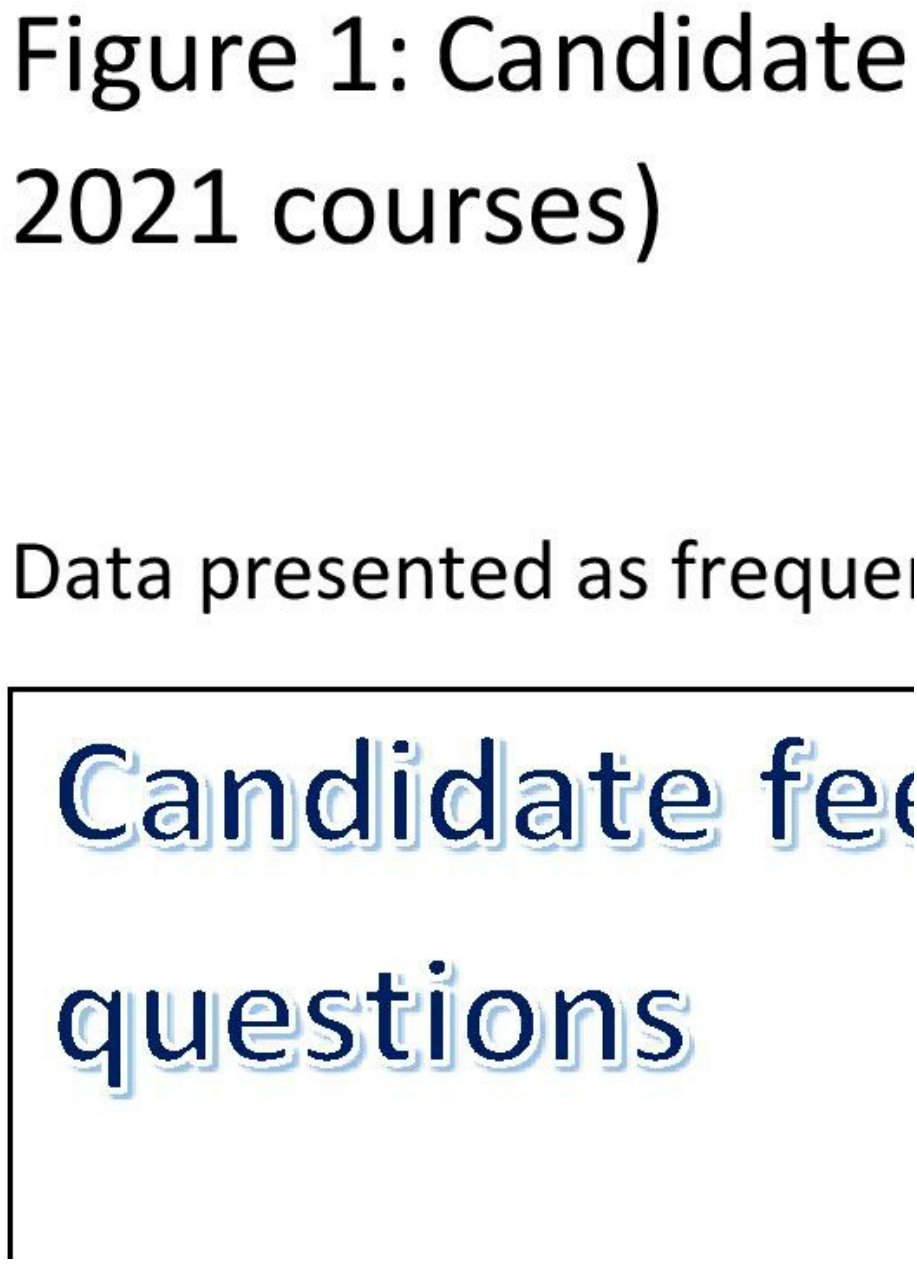

Was the course format s **n (%)**
Did the online logistics v **n (%)**
Was the course content **n (%)**
Did the course meet you **n (%)**

Did you receive feedbac way? n (%)
Did this course help exam technique? n (%)

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Poster keywords

Simulation, Education

66

The financial burden of anaesthesia: An assessment of anaesthetists knowledge of the cost of drugs in an Irish context.

Eoin Cashman[1], Carol Doherty[2], Wouter Jonker[3]

[1]Department of Anaesthesia, Critical Care and Pain Medicine - Galway University Hospital, Galway, Ireland. [2]Department of Pharmacy, Sligo University Hospial, Sligo, Ireland. [3]Department of Anaesthesia, Critical Care and Pain Medicine - Sligo University Hospital, Sligo, Ireland

Abstract

Introduction:

The cost of healthcare is rising[1]. Clinicians are under pressure to limit the expense of their practice[2]. We hypothesised that anaesthetists over-estimate the cost of certain medications within their stock and over-estimate the cost of medications in comparison to surgical equipment.

Methods:

After gathering data from our pharmacy on the cost of medications used in theatre we developed a short 7-question multiple choice quiz to assess anaesthetists knowledge of the cost of medications and how those compare to the cost of single-use instruments used by our surgical colleagues. The quiz was administered online using SurveyMonkey. Participation was voluntary and recruitment was on departmental and trainee programme WhatsApp groups. On completion participants were informed of their score and provided with a drug price-list.

Results:

N = 76. The average score on the quiz was 42% (median 43%, SD 16%). Two trends emerged - a tendency to over-estimate the cost of opiate medications (fentanyl, alfentanil, morphine) and a tendency to over-estimate the cost of pre-mixed analgesic infusions (Paracetamol 1000mg/100ml and Ibuprofen 400mg/100ml). 35% of respondents incorrectly believed Sugammadex 200mg/2ml to me more expensive than a selected single-use surgical device, a retrieval bag for use in laparoscopy (€74 vs. €122).

Conclusion:

Anaesthetists over-estimate the cost of opiate medications. This may be an inadvertent consequence of them being stored securely and subsequent perceived scarcity. Anaesthetists also over-estimate the cost of Paracetamol and Ibuprofen pre-mixed for infusion. This may be due to higher prices historically. Anaesthetists are expected to know the pharmacological properties and physiological effects of the drugs they use. More should be done in hospitals to ensure they are also up-to-date on their financial cost. To ensure a perceived but unfounded cost saving benefit does not interfere with appropriate prescribing we propose an annual departmental drug pricing review to ensure a unity of understanding and direction.

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Poster keywords

Anaesthesia, Cost, Budget, Sugammadex, Surgery

67

Improving the effectiveness of the Endoscopy Unit in Fiona Stanley Hospital

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Abstract

Objective:

To identify potential factors affecting unit performance, and to address these in order to achieve optimal flow in the unit and safe delivery of patient care.

Method:

A prospective audit was completed, analysing factors which delay patient turnaround time in the unit over a two-week period. Turnaround time was defined as the time between a patient leaving the procedure room and the next patient entering. For the purpose of this clinical audit, turnaround time was used as a marker of efficacy and the standard was set at 15 minutes.

Endoscopy nurses completed a questionnaire for each patient who met the inclusion criteria. The questionnaire asked responders to log when there was a delay to the start of a case and to identify the causes. Patient demographic data, case urgency, admission type and anaesthetic assessment duration were also documented. TMS data from the audit period was analysed separately to assess turnaround time.

Results:

This clinical audit included 154 patients, aged between 19 and 95 years, with a mean age of 59.8 years. The procedures performed were gastroscopy (36%), colonoscopy (23%) and combined gastroscopy/colonoscopy (22%). Outpatients accounted for 67% and 74% of patients underwent an elective procedure.

A delay to the start of a case was documented as occurring in 55.1% of cases. When a delay to the start of the case was reported, the causes were multifactorial. Consent was listed as a reason for delay in 87% of cases, followed by medical/surgical history (40%) and list order changes (31%).

The anaesthetic assessment took <15 minutes in 80% of cases. Anaesthetic assessment took > 30 minutes in 2.5% of cases. In cases where anaesthetic assessment took longer than 15 minutes, an overall delay to the start of the case occurred in 64% of cases.

The median turnaround time for all patients was 13 minutes. The median turnaround time for elective cases was 12 minutes, whereas for emergency cases it was 17.5 minutes.

Conclusion:

Anaesthetic assessment time was efficient. Causes of delay were multifactorial, and revolved around consent, complex patient medical/surgical history, and list order changes. The overall standard for turnaround time was met.

Recommendations proposed to improve the outcome of the endoscopy unit revolved around redesigning information collation processes in the elective and emergency pathways. This includes an updated version of the E-referral system and the introduction of the nursing telephone pre-anaesthetic assessment form. Effective utilization of the team huddle time, a proposal for an anaesthesia file to enable timely anaesthetic review, identification of a “gold” case to start the list and having familiar team members to foster improved communication and collegiality has also been proposed.

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Poster keywords

Quality Improvement Project, Endoscopy Unit, Fiona Stanley Fremantle Hospital Group, Delay reasons for theatre start time, Redesign of service delivery

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IMPACT OF COVID-19 PANDEMIC ON CHRONIC PAIN MANAGEMENT CLINIC DELIVERY OF CARE

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Abstract

Introduction

Most medical resources were redistributed during COVID-19 pandemic resulting in closure of some services for some time and reallocation of staff. The affected patients experience emotional imbalances , disability and social isolation which are frequently associated with chronic pain and often result in a vicious circle that compromises their quality of life [1,2]. According to the NDTP (National treatment and purchase fund) report as of July 2021 overall 13,128 patients are in waiting list for pain management services of which 5,141 patients have been waiting for more than 18 months[3].The aim of study is to assess impact of COVID-19 pandemic on chronic pain management clinic delivery of care Methods.

Methods

An online survey was sent to pain consultants, registrars, SHOs, General practitioners & nurses involved in chronic pain and general practitioners working in Southwest public hospitals in the Republic of Ireland. Responses were collected between the 25th April 2021 and 30th May 2021.

Results

We received responses from 10 consultants, 16 registrars, 2 SHOs, 10 nurses and 2 general practitioners. 45 % of respondents preferred to assess patients in person, 37% wanted to assess patients on telephone. 60% of respondents liked remote pain clinic to be continued even after pandemic.18% of the respondents think that patients are not attending clinics due to fear of contact of COVID while 37% think that patients had safety concern about giving COVID-19 to their family member at home when coming to pain clinics. 50% of respondents think that patients became more depressed during pandemic 30% of respondents think that patients had reduced their mobility because of chronic pain. Interestingly 47% of respondents think that there is an increase in number of patients presenting with chronic pain. 92% of respondents observed that back pain as the most common presentation in pain clinic and 90% of the respondents observed an increased opiate use in chronic pain patients as compared to pre-pandemic time.

Conclusion

This survey of healthcare staff involved in pain services in Southwest of Ireland has revealed how chronic pain services have been affected during the pandemic from the eyes of pain service providing staff.

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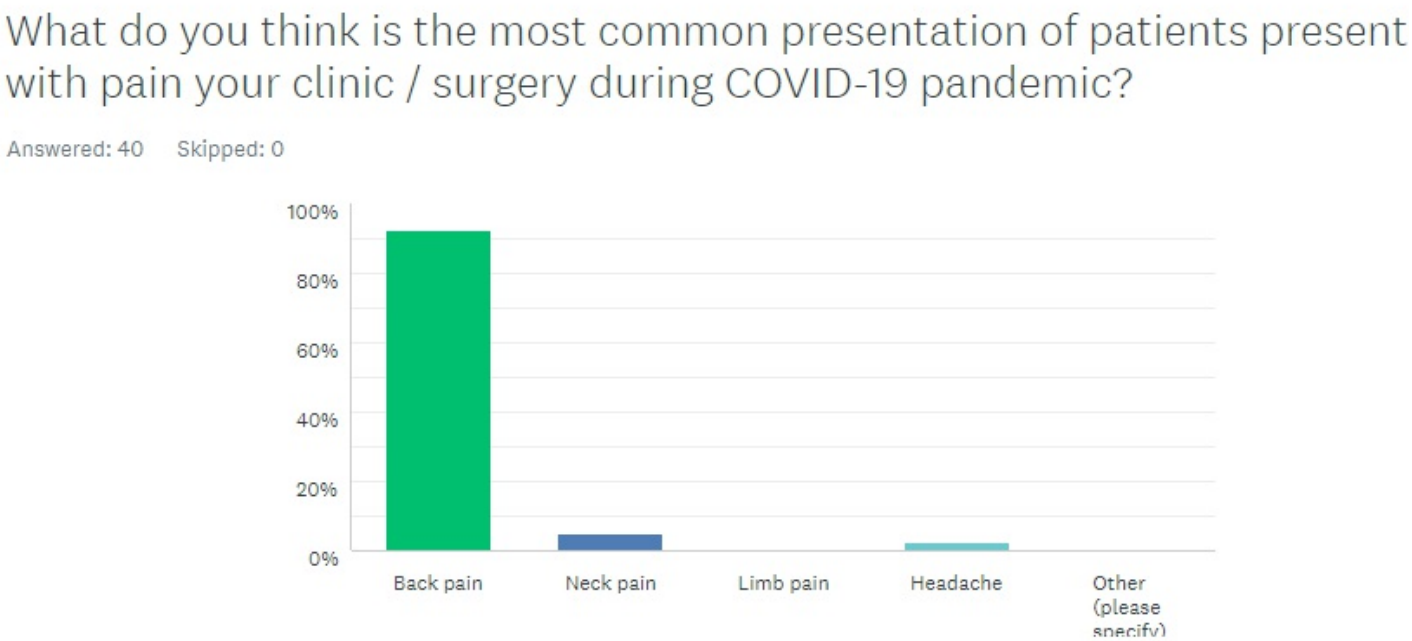

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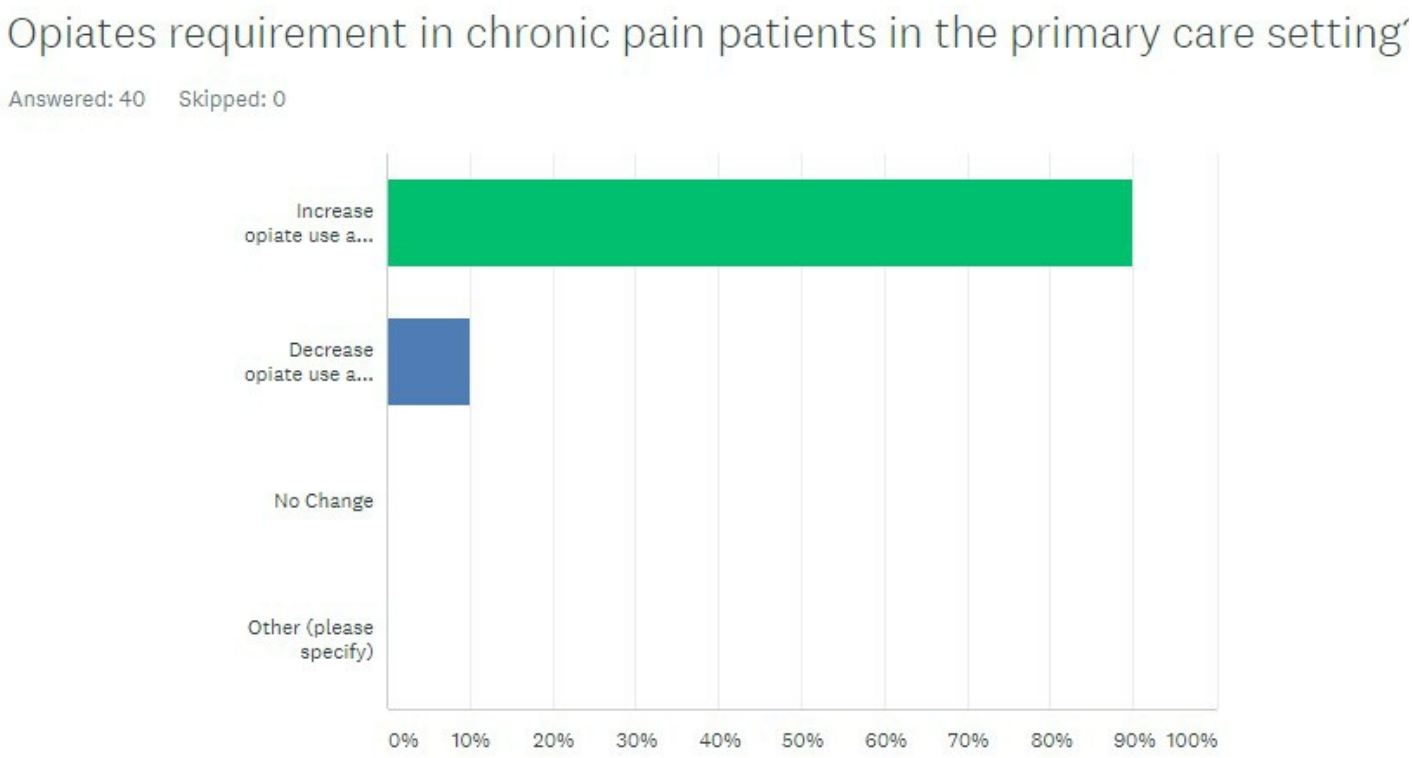

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Poster keywords

chronic pain clinic, COVID-19 Pandemic, Delivery of care

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Survey of Interest in Peri-Operative Care Post-Graduate Qualification in Ireland

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Abstract

Introduction:

The population in Ireland is ageing, with projections that in 2050, 1 in 4 citizens in Ireland will be over 65 years of age in comparison to 1 in 7 in 2019 [1]. This shift in demographics is an impetus to improve healthcare systems to cater to the increase in complexity of the service users. Increasing numbers of Older Persons are undergoing surgery on an emergency and elective basis and as a result, have increased mortality and are at higher risk of loss of function following a surgical procedure [2]. Peri-operative medicine is an emergent area and data from systematic improvements being rolled-out in UK is positively impacting patients outcomes [3].

Methods:

An brief online survey tool was employed to gather data regarding Multidisciplinary team (MDT) interest in a formal post-graduate qualification to improve care and outcomes for patients in the peri-operative period. Four questions were posed regarding profession, area of specialisation, level of post-graduate qualification and time commitment preference. Survey was distributed on social media platforms, in particular to groups with a special interest in Peri-Operative Care.

Results:

There were 122 responses to the survey. Interest was expressed by physicians (68%), nursing staff (15%) and allied health care professionals (13%).

Areas of specialisation included Geriatric Medicine (43%), Anaesthesia (25%), General Surgery (10%), Orthopaedics (5%) and Vascular Surgery (2%). All interested parties were interested in a part-time course. Level of post-graduate qualifications sought include Certificate (21%), Diploma (43%) and Masters (36%) respectively.

Conclusions:

This survey shows there is an appetite to improve the care being provided to all patients during the peri-operative period in a formal and organised manner in Ireland. An interesting factor is the multidisciplinary expressions of interest in a qualification of this nature will drive further collaboration and system change to improve the holistic care of the patient cohort during the peri-operative period.

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Poster keywords

survey, post-grad qualification, better care, peri-op care

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SPINAL ANESTHESIA VERSUS GENERAL ANESTHESIA IN NEONATES UNDERGOING INFRAUMBILICAL SURGERIES

Shimaa Ahmed Al-Touny, Medhat Lamei, Ezzat El Taher, Mahmoud Hosny Ahmed Ali
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Abstract

Introduction:

Anesthetists should be oriented with the rapidly changing physiology of the neonates, the pathology of coexisting diseases and the pharmacology of used medications. The multisystem immaturity of this age generates developmental differences in the drug handling and response compared to older children[(1,2)]. Regional anesthesia in pediatrics may be beneficial[(3)] to avoid airway manipulation and respiratory depression. It also abolishes the intraoperative pain and decreases the neurotoxic effects of general anesthetics[(4)]. So, this study supposed that spinal anesthesia could be a reasonable alternative to general anesthesia. The objectives were to compare spinal versus general anesthesia in neonates undergoing infraumbilical surgeries regarding perioperative hemodynamics variations and complications.

Methods:

The protocol was approved by our institutional ethical committee and registered at PACTR (trial ID: PACTR201907523457024).

This study was a comparative single blinded clinical trial included 36 neonates. Exclusion criteria included premature neonates, infraumblical surgeries that lasted > 90 minutes and parents' refusal to participate. The procedure was explained to the parents and a written consent was taken.

The operating theatre was prepared with a warm blanket, and basic monitoring. Intravenous cannulation was performed.

The patients were randomly assigned to two equal groups using computer generated random numbers which were concealed in closed envelopes. Spinal anesthesia(SA) group received intra-thecal bupivacaine 0.5% (1mg/kg). General anesthesia(GA) group received inhalational Sevoflurane for induction and maintenance and Paracetamol 15mg/kg IV for analgesia.

The study groups were compared for intra-operative and postoperative hemodynamics variability and any complication incident was recorded.

Results:

Intraoperative hemodynamics was statistically significantly more stable in SA group. Post-operative complications were statistically significant lower in SA group compared to GA group (**p**<0.05), table1. Postoperative heart rate (HR) was statistically significant lower in the SA group compared to the GA group (**p**<0.05), figure1.

Conclusion:

Spinal anesthesia is a good alternative to general anesthesia in neonates with better hemodynamics stability and lesser complications.

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Figure (1): Postoperative heart rate (beat/minute) with SD in both groups of the study at different time points.

Table (1): Post-operative complications in both groups

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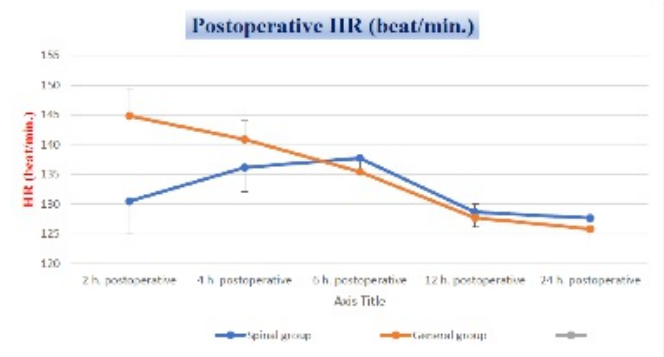

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Complications	Spinal group n=18	General group n=18	p- value
Agitations	1	2	
Nausea & vomiting	0	2	
Agitation & vomiting	0	3	
Total number (%)	1 (5.56 %)	7 (38.89 %)	0 .0161 (*)

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Poster keywords

neonate, spinal, anaesthesia, surgery, infraumbilical