RA-UK 2019 ASM

Thursday 16th – Friday 17th May

Belfast, The ICC

Abstract Booklet

Oral Presentation

Electronic Regional Anaesthesia Database: analysis on the quality of documentation of peripheral nerve blocks and the potential for a Welsh Regional Anaesthesia Network

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[1]Royal Gwent Hospital, Newport, United Kingdom. [2]University Hospital of Wales, Cardiff, United Kingdom

Abstract

INTRODUCTION

We examined the effect of the introduction of an Electronic Regional Anaesthesia Database (ERAD) on the quality of documentation for peripheral nerve blocks (PNBs) at our hospital.

METHODS

We retrospectively analysed the anaesthetic charts of 100 patients who had received a PNB, 50 before and 50 after the database's inauguration. We compared the details recorded against a checklist of key desirable features[1,2,3].

RESULTS

Our analysis shows that documentation of all of the key elements of a peripheral nerve block in our checklist improved following the introduction of an ERAD.

Table 1

	Before database (%)	With database (%)	Difference (%)
Indication for procedure/type of surgery	100	100	0
Consent and risks	65	100	35
End time	0	100	100
Start time	10	100	90
Patient identifiers present	100	100	0
Responsible consultant anaesthetist identified	90	100	10
Block operator identified	100	100	0
Assistance identified	0	100	100
Type and quantity of sedation	92	100	8
Name of block	95	100	5
Laterality of block	40	100	60
Aseptic technique	55	100	45
Needle make, gauge, length	70	100	30
Method of localisation	100	100	0
Needle entry	40	85	45
Note on aspiration	70	100	30
Note on monitoring for pain on injection/paraesthesia	75	100	25
Local anaesthetic concentration	90	100	10
Local anaesthetic volume	100	100	0
Procedure documented	100	100	0
Documentation legible	95	100	5
Complications noted	50	100	50

DISCUSSION

The ERAD was introduced in February 2018. Clinicians log in to a Microsoft Access Database from a computer in theatre and enter the details of the PNB. Once complete, a sticky label containing details of the block is printed and attached to the patient's anaesthetic chart.

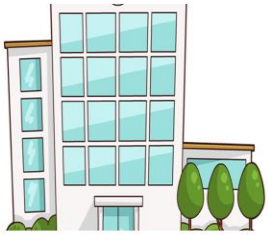
The results demonstrate a large improvement in the completeness of the anaesthetic procedure record following the introduction of an ERAD. This is of little surprise as the database prompts the clinician for each key element. The record will not save and print if it is not fully complete.

It was not possible to locate the anaesthetic chart of one patient in the "before" group. The electronic database is saved on the local intranet and maintained to local health board governance standards.

We highlight some of the other advantages of an ERAD (figure 1).

We are exploring the potential of the database to be shared across local health boards in South Wales.

- Personal logbook
- Printed sticker of procedure for anaesthetic chart - no duplication
- Pre-filled block characteristics saves time
- Facilitate research
- Identify lists with good training opportunities



- Runs on existing computer software
- Cheap hardware (printer £100)
- Quick and easy set up
- Facilitates clinical governance by improving record keeping

- Maintains patient confidentiality
- Potential for feedback via automated telephone questionnaire

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Poster No: 1

COMPARING RESISTANCE TO WATER FLOW BETWEEN TWO SPINAL NEEDLES

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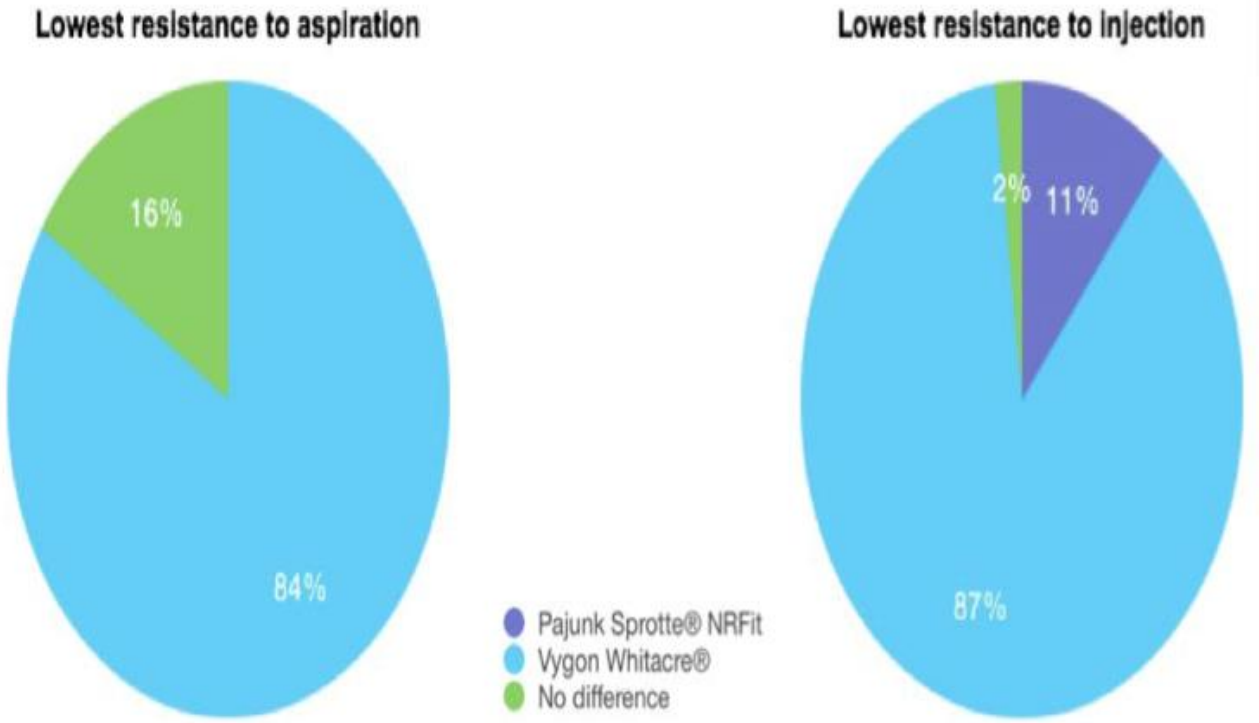
Abstract

Introduction: This study compares resistance to water flow between Vygon Whitacre® 25G x 90mm and Pajunk Sprotte® NRFit 25G x 90mm spinal needles.

Methods: Fifty-five ward nurses who have never used these needles before were recruited to use both needles in a simulated practice. Each needle was primed with water then attached to 5 ml syringe containing 2ml water. Using the same hand, each nurse was asked to aspirate 1 ml from a glass filled with 10ml water and then injects 3ml under the water in the same glass. Unlimited attempts were permitted until they were able to determine if there is a difference in resistance between the two needles or not. The following data were recorded: 1) The needle with the lowest resistance to aspiration and injection 2) The number of aspiration and injection attempts. Participants were not aware which needle is the newly introduced spinal needle.

Results The majority of the participants felt that there is less resistance to aspirate and inject when using the Vygon Whitacre® compared with the Pajunk Sprotte® NRFit needle. The majority of participants were able to determine the difference in resistance in one attempt (72% of participants for aspiration and 74% for injection). The maximum number of attempts was three.

Figure1: Resistance to aspiration and injection



Discussion: Practitioners who have recently switched to the use of Pajunk Sprotte® NRFit 25Gx 90mm from Vygon Whitacre® 25G x 90mm spinal needle need to be aware of the higher resistance to flow on aspiration and injection.

Poster No: 2

Learning Points From the Creation of a Regional Anaesthetic Infusion Chart

James Fullick, Anthony Byford-Brooks, David Burckett-St-Laurent

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Abstract

Introduction:
Regional anaesthesia is a flourishing sub-speciality which has extensive research investigating potential advantages for a variety of operations. There remains a requirement to ensure clear and concise records of procedures undertaken along with support for those administering care to these patients. As regional blocks and local anaesthetic infusions remain a relatively novel form of analgesia and anaesthesia many medical staff feel less confident in their use. This project explores the challenges surrounding designing a new proforma allowing clear and simple documentation of regional anaesthetic infusions along with simplifying record keeping, aftercare and troubleshooting.

Methods:
Focusing initially on what key information the chart needed to portray our team set out to create a colour-coded, clearly formatted document which followed similar design to other anaesthetic charts in the department. Multidisciplinary discussions ensured widespread satisfaction and ease of use.

Discussion:
The long-term aim of this project was to supply a chart which would not only provide a clear, concise record of regional blocks and patient progress but also be suitable for use by non-regional specialists and juniors. Ultimately this document will allow patients who are receiving regional anaesthesia infusions to be cared for at trusts who would otherwise have been unable to manage them. The outsourcing of these patients to less acute trusts will be invaluable in ensuring acute beds are available for emergency or high dependency patients. By ensuring clear records, concise guidelines and jargon-free management these charts potentially save space, time and money while maintaining patient safety and satisfaction.

Poster No: 3

A retrospective audit of anaesthetic technique for anterior cruciate ligament repair and it's affect on the post operative period

Peter Thomas, Ravi Nair

Mid Essex Hospital NHS Trust, Broomfield, United Kingdom

Abstract

Introduction

We present a 60 patient retrospective audit of anterior cruciate ligament repair, comparing anaesthetic technique with post-operative experience.

Methods

Retrospective analysis of notes was performed. Data collected included anaesthetic technique, incidence of post-operative nausea, pain scores, analgesics required, time spent in theatre recovery and unplanned admissions. Ethics approval not required.

Results

Three groups of anaesthetic technique were identified. A) General anaesthetic (G.A) plus adductor canal block (n=28), B) G.A plus local anaesthetic (n=15) (L.A) infiltration by surgeon at the start of procedure, and C) G.A + L.A infiltration by surgeon at end of procedure (n=17). Group A mainly (26/28) received 20mls ropivicaine 0.375, (2/28) receiving 30mls 0.5% bubivicaine. Group B received Marcaine with adrenaline whilst Group C received Xylocaine with adrenaline. Post-operative analgesics were converted into oramorph equivalents. See table below for additional results.

	Intra-Op Analgesia	Recovery Analgesia	Day unit analgesia	Patients requiring antiemetics in recovery	Patients on day unit requiring antiemetics	Median recovery pain score	Median day unit pain score	Time in receovery	Unplanned admissions
Group A (n=28)	108mcg fentanyl	77mcg fentanyl	17mg oramorph	n=1	n=1	1	1	72 mins	n=0
Group B (n=15)	123mcg fentanyl + 5mg morphine	36mcg fentanyl + 10mg oramorph	16mg oramorph	n=0	n=0	1	1	67 mins	n=0
Group C (n=17)	105mcg fentanyl + 7mg morphine	32mcg fentanyl	5.4mg oramorph	n=0	n=0	1	1	56 mins	n=0

Discussion

Despite the higher intra-operative opioid requirements in the non-adductor canal block, there was a lower post-operative analgesic requirement in these patients. Group B had slightly higher intra-operative and post-operative analgesic requirements than the other two groups and group A had the longest time spent in recovery, although the differences were small. From the results of this study, one technique cannot be recommended above another.

Poster No: 4

Regional anaesthesia for awake sub-pectoral implantable cardiac device insertion: a case report

Thomas Wojcikiewicz, Amit Pawa, Madhvi Vaghela

Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom

Abstract

Introduction

A 70 year old gentleman required the sub-pectoral re-insertion his cardiac-resynchronisation therapy defibrillator (CRT-D). His medical history included severe heart failure and severe COPD. He weighed 50 kg with a BMI 16kgm^2.

The lead in his device was defective and the defibrillator had displaced from its subcutaneous position.

We describe a unique general anaesthesia-free, regional technique for the procedure.

Case

Ultrasound-guided regional anaesthesia was achieved with:

·Thoracic paravertebral with 5mL 1% lignocaine plus 5mL 0.25% Levobupivacaine using an 18G SonoTap needle.

·Pecs 1 block with 5mL 1% lignocaine plus 5mL 0.25% Levobupivacaine with an 80mm B-Braun needle.

·Serratus anterior block with 7.5ml 1% lignocaine with adrenaline (1:10000) plus 10mL 0.25% Levobupivacaine with an 80mm B-Braun needle.

Sedation was achieved 1mg Midazolam and Remifentanil TCI, effect-site concentration 0.5 to 0.7ngmL^{-1}. No intra-operative analgesia was required. The incision site was infraclavicular, in the mid-clavicular line.

Discussion

Implantable defibrillators and resynchronisation therapy is recommended in patients with heart failure and a prolonged QRS complex [1].

Insertion is typically in an infraclavicular subcutaneous pocket. In lean patients this can lead to skin necrosis or device slippage [2]. Different regional anaesthetic techniques for pacemaker

insertion have been described including supraclavicular nerve, interscalene brachial plexus and cervical plexus blockade [3][4].

Sub-pectoral implantation suits lean patients and has been performed under general and local anaesthesia infiltration alone [2][5]. At our institution, they are performed under general anaesthesia. This is the first case of device insertion under a combined paravertebral and myofascial plane blocks technique.

References

1. NICE (2014). Implantable cardioverter defibrillators and cardiac resynchronisation therapy for arrhythmias and heart failure . Available from: https://www.nice.org.uk/guidance/ta314/documents/arrythmias-icds-heart-failure-cardiac-resynchronisation-fad-document2. [Accessed 15/2/19]

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4. Raza M, Vasireddy A, Candido K, Winnie A, Masters R. A complete regional anesthesia technique for cardiac pacemaker insertion. J Cardiothorac Vasc Anesth. 1991. 5:56–58

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Poster No: 5

A novel training level targeted, operation focused, deanery approved, regional anaesthesia teaching course

Thomas Miller[1], Karim Mukhtar[2], Tushar Dixit[2]

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Abstract

Introduction

A plethora of regional anaesthesia courses exist regionally, nationally and internationally. They tend to focus toward beginners new to the speciality or self-directed enthusiasts. We sought to launch a new course specifically for intermediate trainees who may not only have an interest in the topic but also a requirement to fulfil RCoA training objectives.

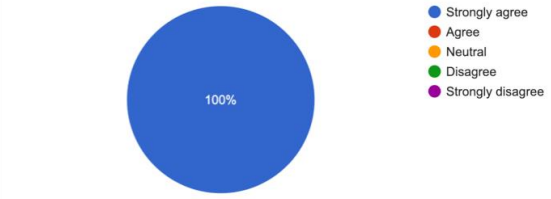
Methods

We took account of the RCoA curriculum and considered which operations an intermediate trainee may face that would benefit from regional anaesthesia rather than simply dictating specific blocks to learn. Pre-course questions were sent to engage candidates in considering which blocks would be appropriate for which operations prior to the course. Through four stations covering upper limb, lower limb, trunk and abdomen and neuraxial and paravertebral these topics were explored in a practical fashion, with maximal candidate scanning time.

Results

I feel more confident in the conduct of: Upper limb blocks:

14 responses

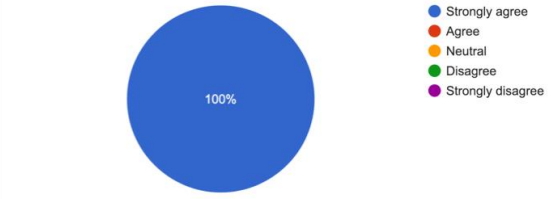


I feel more confident in the conduct of: Trunk and Abdominal block

14 responses

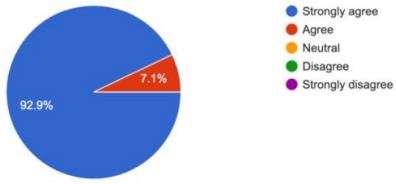
I feel more confident in the conduct of: Lower limb blocks:

14 responses



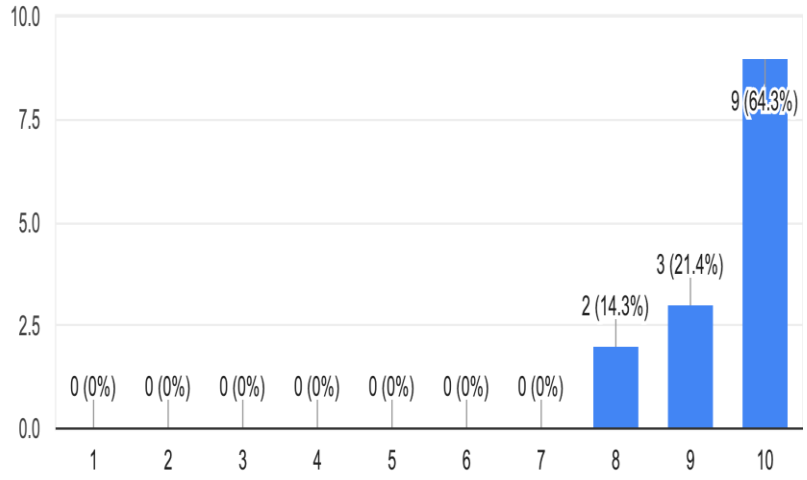
I feel more confident in the conduct of: Paravertebral and spinal blocks and scanning:

14 responses



Global score for course overall:

14 responses



Discussion

The course was extremely well received by candidates, all of whom left much more confident in performing regional anaesthesia relevant to their level of training and experience. We believe that adopting an operation or incisional based approach to teaching regional anaesthesia offers greater applicable knowledge than didactically teaching specific blocks. Within our region there are no courses specifically designed toward trainees embarking on increasing amounts of solo work, in and out of hours, who wish not only to be able to offer patients appropriate regional anaesthesia options but also to satisfy the Royal College training requirements. This course has satisfied this requirement, the cost to the deanery; £10 per candidate.

Supported by Mindray.

Poster No: 6

A retrospective analyses of anaesthetic technique for total knee replacement and it's affect on the post-operative period

Peter Thomas, Ravi Nair

Mid Essex Hospital NHS Trust, Broomfield, United Kingdom

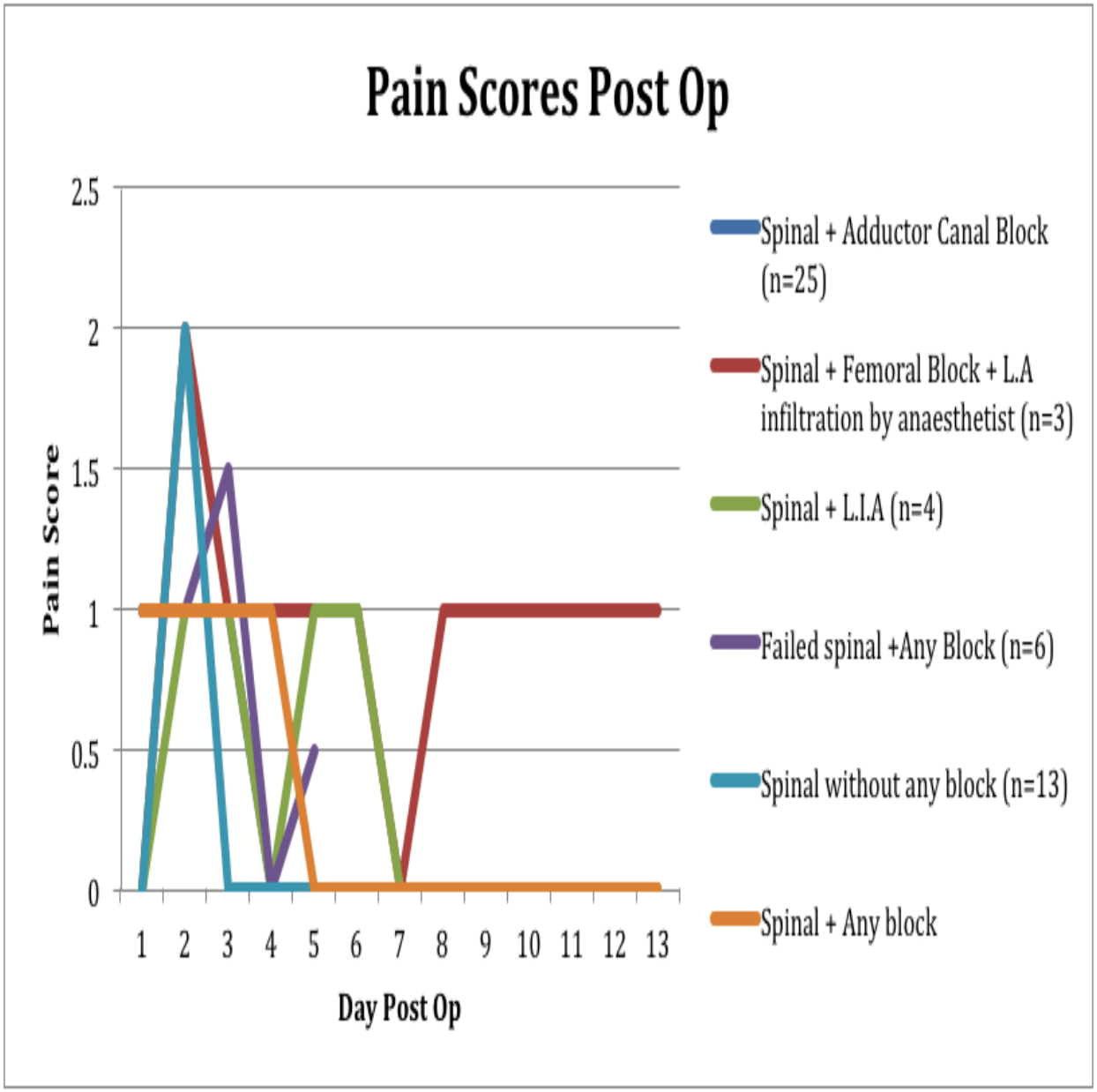
Abstract

Introduction
We present an audit of total knee replacement, comparing anaesthetic technique with post-operative outcomes.

Methods
60 notes were retrospectively analysed. Data collected included anaesthetic technique, post-operative nausea incidence, pain scores, analgesic required, time spent in theatre recovery, time to mobilisation and hospital length of stay.

Results
Five groups of anaesthetic technique were identified; Spinal plus adductor canal block (n=25), Spinal plus femoral block plus knee capsule infiltration (n=3), Spinal plus knee capsule infiltration (n=4), Failed spinal plus any block (n=6), Spinal without block (n=32). A sixth sub-group (n=32), combining spinal plus any block was analysed. See table and graph below, displaying results.

	Intra-op analgesia (morphine equivalents)	Oramorph in recovery	Nausea in recovery (n=)	Nausea on ward	Time in recovery	Max pain in recovery	Days until discharge	Mean time to 1st mobilisation	Mean time of 1st walk
Spinal + Adductor Canal	0	0	1/25	7/25	50 mins	0/3	4	10 a.m	Day 1 6 p.m
Spinal + Femoral Block + Knee Infiltration	0	0	0/3	0/4	33	0/3	6	10.30 a.m	Day 1 6 p.m
Spinal + L.I.A	0	0	0/4	2/4	90	0/3	5	10.30 a.m	Day 1 Midnight
Failed spinal + any block	8.6mg	12mg	1/6	1/6	98	2/3	4	10.30 a.m	Day 2 3a.m
Spinal, no block	0	0	0/13	0/13	49	0/3	4	12 a.m	Day 2 7a.m
Spinal + any block	0	0	0/32	0/32	48	0/3	4	10.30 a.m	Day 1 7 p.m



Discussion

There was minimal nausea in recovery or wards. Failed spinal resulted in prolonged time spent in recovery and delayed mobilisation. Those receiving any regional block plus spinal left recovery quickly and walked on day 1 compared to those receiving spinal without additional block not walking until day 2. Comparing regional techniques, adductor canal block resulted in fastest mobilisation, walking and days to discharge. Pain scores and analgesic requirements were similar. Results demonstrate the importance of additional regional anaesthesia vs spinal alone.

Poster No: 7

Development of an Ultrasound Phantom for Teaching the Erector Spinae Plane Block

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Abstract

Introduction

The Erector Spinae Plane (ESP) block produces anaesthesia of the thoracic nerve roots. Its low risk profile, and relative ease in block skill acquisition make it an attractive option in the regional anaesthetic management of thoracic pain, especially in rib fracture. However, in our institution, full 24/7 service provision is lacking due to staff unfamiliarity with the sonoanatomy, and inexperience in block performance. To enable more widespread skills in ESP blocks, we created an education programme consisting of an e-learning module, and a homemade gel phantom to practice needle placement.

Methods

For phantom construction, a model thoracic spine and ribs were first sealed in silicone. Muscle layers were created from a gel wax base with variable proportions of paraffin wax and psyllium husk, and then wrapped in cling film and placed over the spine. An interactive e-learning module was created covering the pathophysiology of rib fractures and the anatomy, and sonoanatomy, of the ESP block.

Results

A cost effective, realistic ultrasound phantom was created to enable identification of muscle layers of the back, transition from rib to transverse process, and to practice real-time needle placement for the ESP block (figure 1). This practical learning is consolidated with an e-learning module (figure 2).

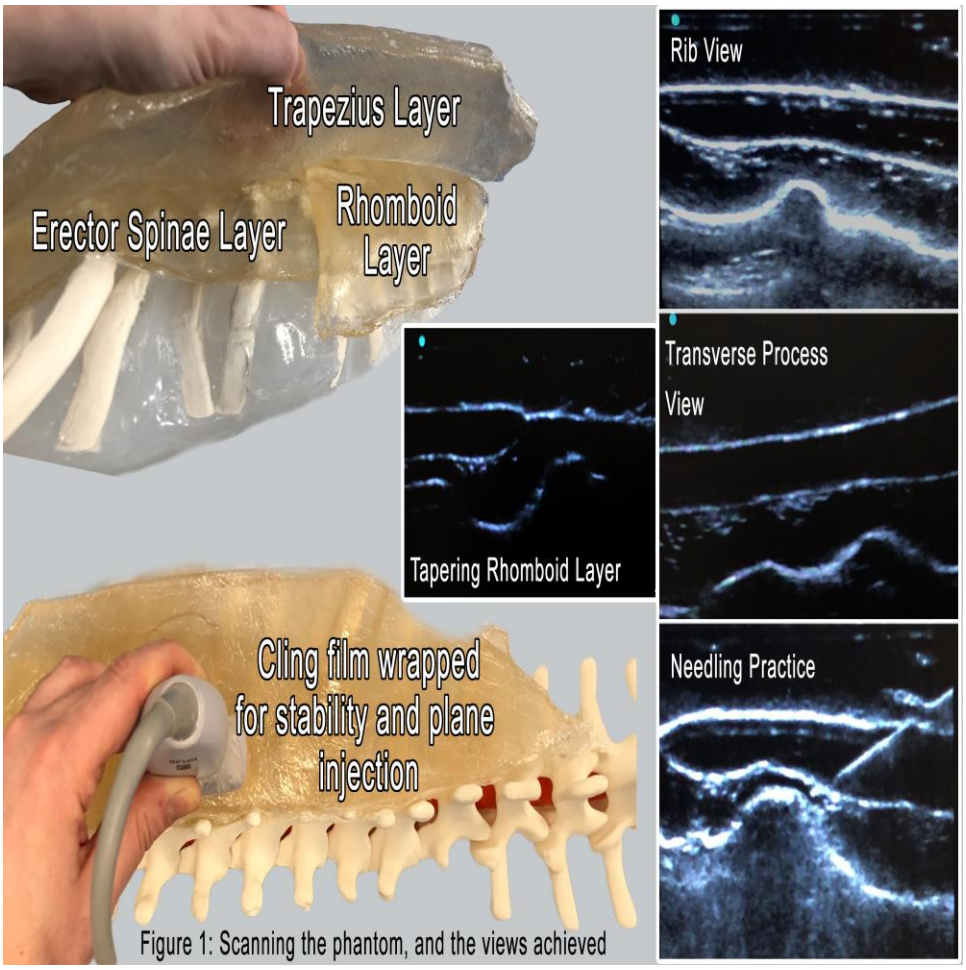

Figure 1: Scanning the phantom, and the views achieved

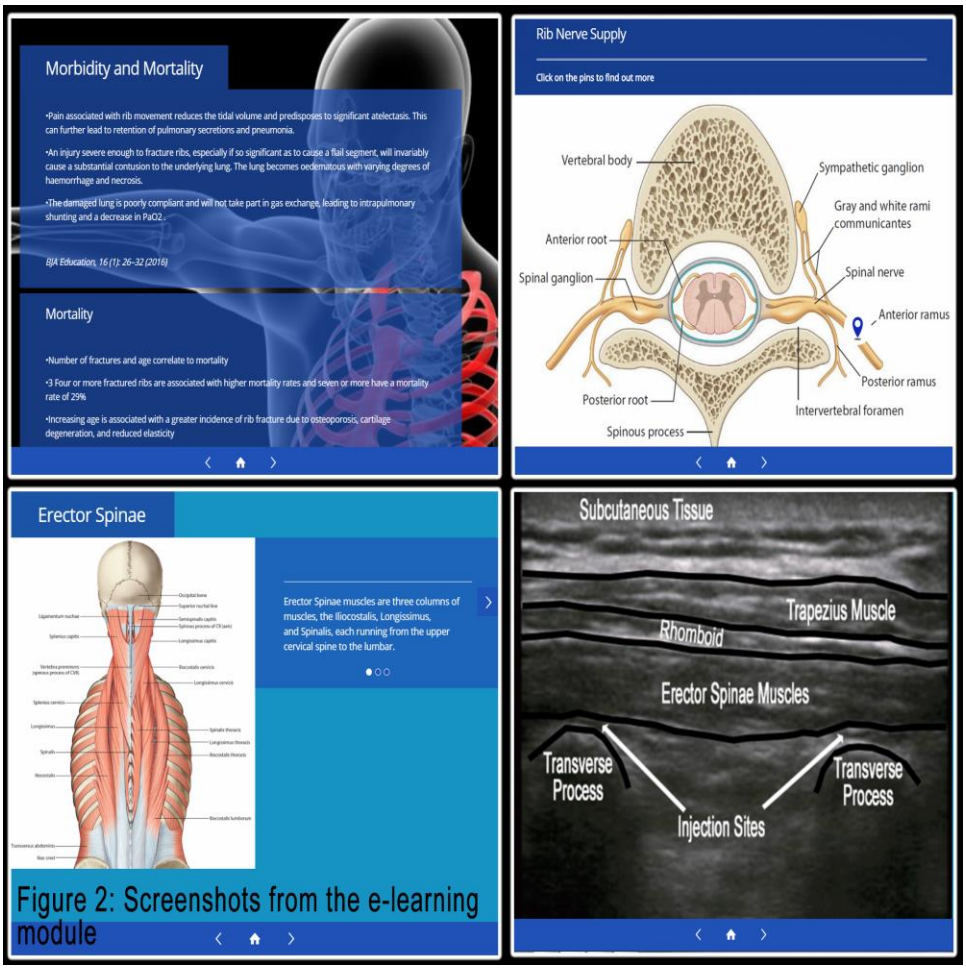

Figure 2: Screenshots from the e-learning module

Discussion

We plan to commence a pilot programme for feedback and evaluation. We then intend to use this education package to enable more clinicians to gain confidence and skills in performing ESP blocks in our institution, achieving more timely and effective pain management in rib fracture.

Poster No: 8

Regional analgesia in the clumsy parturient: Combined popliteal and adductor canal block to facilitate reduction of a fractured ankle

Dave Robinson

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Abstract

Introduction

Accidental injury occurs in 6% of all pregnancies and accounts for between 17 – 39% of all peripartum Emergency Department visits. A large proportion of this trauma is due to slips and falls because of increased joint laxity and weight gain shifting the centre of gravity [1].

Around 2% of all pregnant women will require non-obstetric surgery, carrying an increased anaesthetic risk, especially of aspiration and cardiorespiratory volatility [2].

Case

A 34-year-old 78Kg fit and well primigravida woman with a gestation of 18 weeks presented to the Emergency Department following a fall at home. She sustained a fracture-dislocation of her distal left tibia and fibular which required reduction and stabilisation.

In order to avoid procedural sedation, as well as the humanitarian aspect of good analgesia, we provided a regional peripheral nerve block in the Emergency Department.

Following 50mcg of fentanyl for positioning, using ultrasound guidance, we injected 20ml of 0.375% levobupivacaine around the common peroneal and tibial nerves at the popliteal crease, and a further 20ml of 0.375% levobupivacaine around the femoral nerve branches in the distal sub-sartorial compartment.

After 45 minutes, adequate reduction and stabilisation was achieved with a small amount of Entonox for anxiolysis.

Discussion

Early peripheral nerve blocks provide excellent site-specific analgesia, are free from major side effects, and avoid the need for regular opiates.

In this context, it allows avoidance of procedural sedation and the associated increased risk to the parturient, as well as improving patient outcomes, efficiency and cost effectiveness throughout the hospital stay [3].

References

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Poster No: 9

Interscalene blocks for elective shoulder surgery to improve service efficiency

Sundeep Govind, Mustafa Hamza, Agilan Kaliappan

Basildon Hospital, Basildon, United Kingdom

Abstract

Introduction

Elective shoulder arthroscopy and decompression is performed on a weekly basis at an Essex DGH with 4-5 patients per list. It is typically performed under general anaesthetic or general anaesthetic and interscalene block.

This project was established to evaluate the value of performing the interscalene block and if it improves patient care and theatre productivity.

Methods

The project was registered with the clinical effectiveness unit.

Cases were selected from the 5th October 2017 to the 5th October 2018.

Cases were divided into general anaesthetic (GA) only and general anaesthetic and interscalene block (GA +ISB).

Anaesthetic charts and recovery notes were analysed. Opiate use intra op, opiate use post-op, antiemetic use and time in recovery were noted. Opiates were converted into mg of morphine to aid analysis.

Results

Mean age of the GA group 56, mean age of GA + ISB 60.

Mean time in recovery for GA group 106 minutes, mean time in recovery for GA + ISB group 60 minutes. Students t test run giving a p-value of 0.043, 95% CI for difference between means of 19.6 to 72.19 minutes.

Intra-op opiate use for GA group 16.9mg of morphine for GA + ISB 17.1. p-value 0.92.

Post-op opiate use for GA group 7.58mg, GA + ISB 0.48mg. p-value<0.001, 95% CI 4.4 to 9.6.

Discussion

Results demonstrate that ISB reduces post op opiate requirement and time in recovery.

Following discussion at department meeting it was decided elective shoulder lists would be anaesthetised by anaesthetists able to perform ISB.

Poster No: 10

Improving Patient follow up - From Books to Bytes

Simone Misquita, Hannah Rose, Sean McHale

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Abstract

INTRODUCTION –

Regional anaesthesia blocks are performed frequently in our department. However there is no standardized follow up of these patients. Generally paper records were maintained in a file, however due to logistical and time constraints the rate of follow up was inadequate.

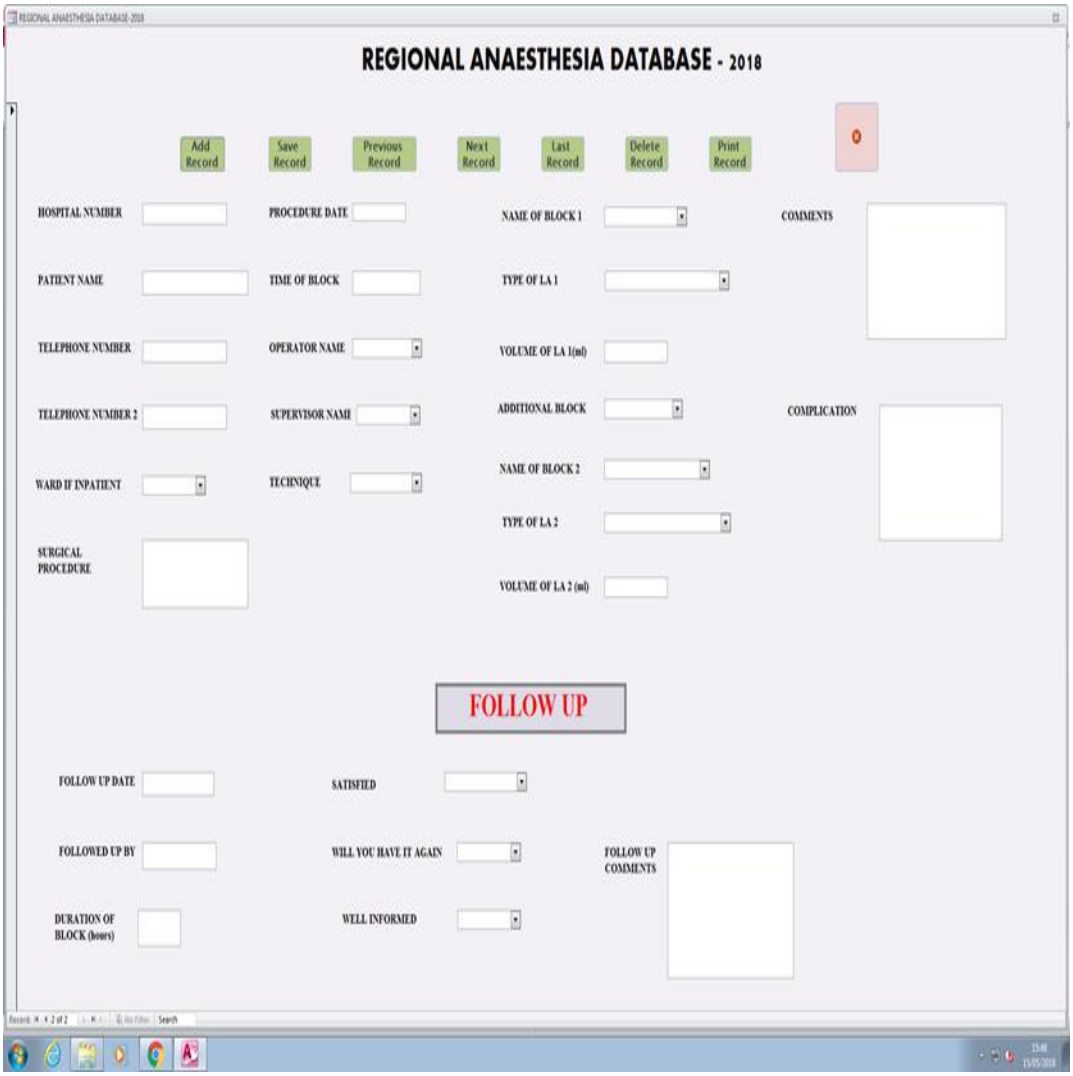
The aim of our quality improvement project was to create an electronic database to store information on regional anaesthesia blocks performed, unify and replace the paper based system that we use, provide a standardized method of documentation, follow up patients, detection of complications and as a logbook for clinicians in the department.

METHODS –

We created an electronic database using Microsoft Access 2010.

Information governance approval was obtained. Patient confidentiality was maintained using a password. Patient consented to enter their details on the database.

Two main tables were designed and integrated on one form for ease of use.



DISCUSSION –

Having designed and used this database in its pilot phase several advantages were noted some of which are:

1.Improved patient follow up, as patient details are easily accessed remotely than a paper based filing system

2. Standardised procedure documentation.

3. Improved quality assurance and outcomes due to patient feedback received

4. Better compliance with data protection due to password protection, rather than in a paper based folder.

6. Logbooks can be extracted from the database

7. Helps organizing data in a logical method

8. Queries and reports organize data for easy retrieval and analysis

9. Revalidation and audit tool

10. Maybe useful in a nationwide registry such as AURORA . 2

References

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Poster No: 11

Lumbar Epidural versus Nerve blocks plus Catheter Analgesia for Lower Limb Amputations – A prospective review

Suzanne Coulter[1], Ross Cruickshank[2], Martin Clark[1]

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Abstract

BACKGROUD AND AIMS

Acute pain is a considerable problem for patients undergoing amputation. Debate continues as to whether pre-emptive epidural analgesia is superior to other techniques. We describe our experience of two separate techniques for managing acute pain following above (AKA) and below knee amputation (BKA).

METHODS

Prospective review June 2017 - June 2018. Subjects were adults undergoing amputation predominantly for peripheral vascular disease.

Patients received either lumbar epidural 24hours pre-operatively or Femoral nerve block (AKA) or Popliteal + Adductor canal block (BKA) followed by insertion of a distal sciatic nerve catheter directly by the surgeon in all blocked patients.

Pain scores recorded from post-operative days 1 to 4, total systemic opiate consumption and time to mobilisation into chair.

RESULTS

69 patients total. 36 epidural and 31 blocks/nerve catheter.

Pain scores revealed trend for BKA to be more painful than AKA regardless of technique (see diagram 1.). Furthermore patients with epidurals demonstrated slightly better pain scores, particularly for BKA (Average pain scores 3.3 versus 4.9).

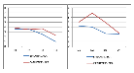

Diagram 1. Average pain scores.

Catheter patients received 63mg morphine for AKA and 60mg for BKA. Patients with epidurals received no opiates as epidural infusions contained 1mcg/ml fentanyl.

There was no significant difference in time to mobilisation. 6 patients (16%) in the epidural group and 6 patients (19%) in the catheter group mobilised to chair by 48h.

DISCUSSION

In our experience an epidural technique confers superior analgesia, particularly in the BKA population who as a group appear to present a greater challenge in providing effective analgesia.

References

Poster No: 12

Improving multi-disciplinary confidence in assisting with regional anaesthesia outside of theatres

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Abstract

Introduction

The use of sole regional anaesthesia in surgery or acute pain is becoming more common, however those explicitly trained and skilled in its use remains a small portion of the anaesthetic workforce. In the ever-increasing demand for NHS services theatre efficiency is constantly under scrutiny(1) however patient safety remains the highest priority. Our project aimed to analyse and improve safety and confidence in assistance with regional anaesthesia outside theatres.

Methods

Initial nursing staff confidence in key safety areas in managing patients who had undergone regional anaesthesia was assessed via a questionnaire. Following this targeted training and reassessment sessions were held along with a poster specifically reinforcing key management points for display in areas designated as “regional anaesthesia” spaces.

Results

Initial results demonstrated significant knowledge gaps, with less than 50% of staff reporting feeling confident at all in 3 of 6 key safety areas. Following training all of these areas demonstrated improved confidence with 100% of staff feeling confident or very confident in 5 of the 6 safety areas.

Discussion

Regional anaesthesia remains a relatively new subspecialty and even more novel is the use of designed ‘block rooms’. These spaces potentially offer the opportunity within smaller hospitals for a single regional specialist to vastly increase theatre efficiency along with acute pain services. This however relies on trained and confident nursing staff who are able to manage these patients. Our project clearly demonstrated an improvement in staff competence and confidence with a long-lasting aid memoire ensuring permanence of change.

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Poster No: 13

Audit of ultrasound guided pecto-intercostal fascial block analgesia post cardiac surgery

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Abstract

Introduction

Recently there has been a move towards 'fast track' cardiac surgery, aiming for early extubation and mobilisation. To achieve this, lower doses of opioids must be used potentially increasing pain. In our unit, pecto-intercostal fascial blocks (PIFB) are being used by several anaesthetists to improve analgesia but the outcomes are unknown, this audit investigated the intervention.

Methods

Between December 2018 to February 2019 we examined the records of patients who were suitable for 'fast-track.' We looked at the incidence of complications, time to extubation, the use of anti-emetics, post-operative & total morphine consumption over 24 hours and patient satisfaction.

Results

We collected the data of 60 patients (PIFB n =30, no regional technique n=30). There were no complications reported in the regional group. Morphine consumption, time to extubation and anti-emetic use were all reduced in the regional group. Patient satisfaction was comparable between both groups.

	PIFB	No regional technique	
Mean Post-operative morphine consumption in 24 hours [mg (SD)]	14.4 (±9.6)	20.3 (±10.3)	30 % reduction
Mean Total Morphine Consumption including theatre [mg (SD)]	17.8 (±10.7)	27.9 (±10.5)	36% reduction
Median Time to Extubation [Hours (IQR)]	3 hours (2 - 4 hrs 30m)	5 hr 48 min (5 - 8 hrs 18m)	50% reduction
Use of anti-emetic	15	21	29% reduction

Conclusion

From our results PIFB in our unit appears to be a safe, opioid reducing intervention, reduces time to extubation with similar patient satisfaction scores. Furthermore, our results show that a regional technique appears more beneficial in the over 60 population.

Poster No: 14

The awake regional list in a district general hospital. An audit of clinical outcomes and patient satisfaction

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Abstract

Introduction

The clinical superiority of regional techniques over opioid alone has long been established [1], however there is less published work on the patient experience of regional anaesthesia. Following the recent development of an awake regional plastic surgery list we were interested in both evaluating clinical outcomes when compared with general anaesthesia and also gauging the patient experience.

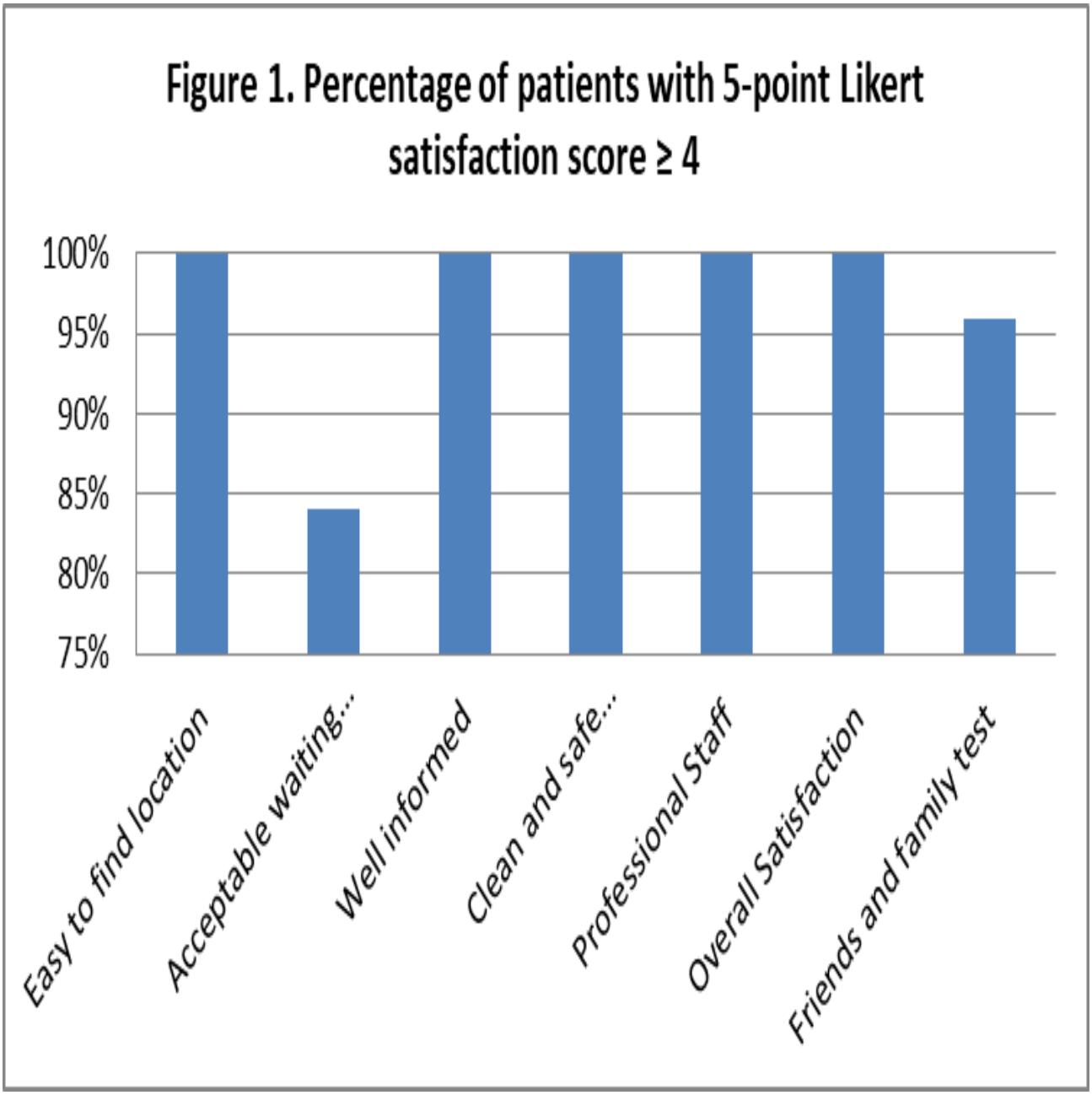
Methods

Ethical approval was not required.
Patient experience: we conducted prospective postoperative interviews with patients who had recently undergone awake upper limb plastic surgery (Figure 1). We aimed to achieve an audit standard of 90-100%.

Clinical Outcomes: we retrospectively evaluated clinical notes of patients who had upper limb orthopaedic awake surgery against matched operations under general anaesthesia for comparison. Exclusion criteria included <18 years, LA only and where the documentation was inadequate. The outcomes measured are found in figure 2.

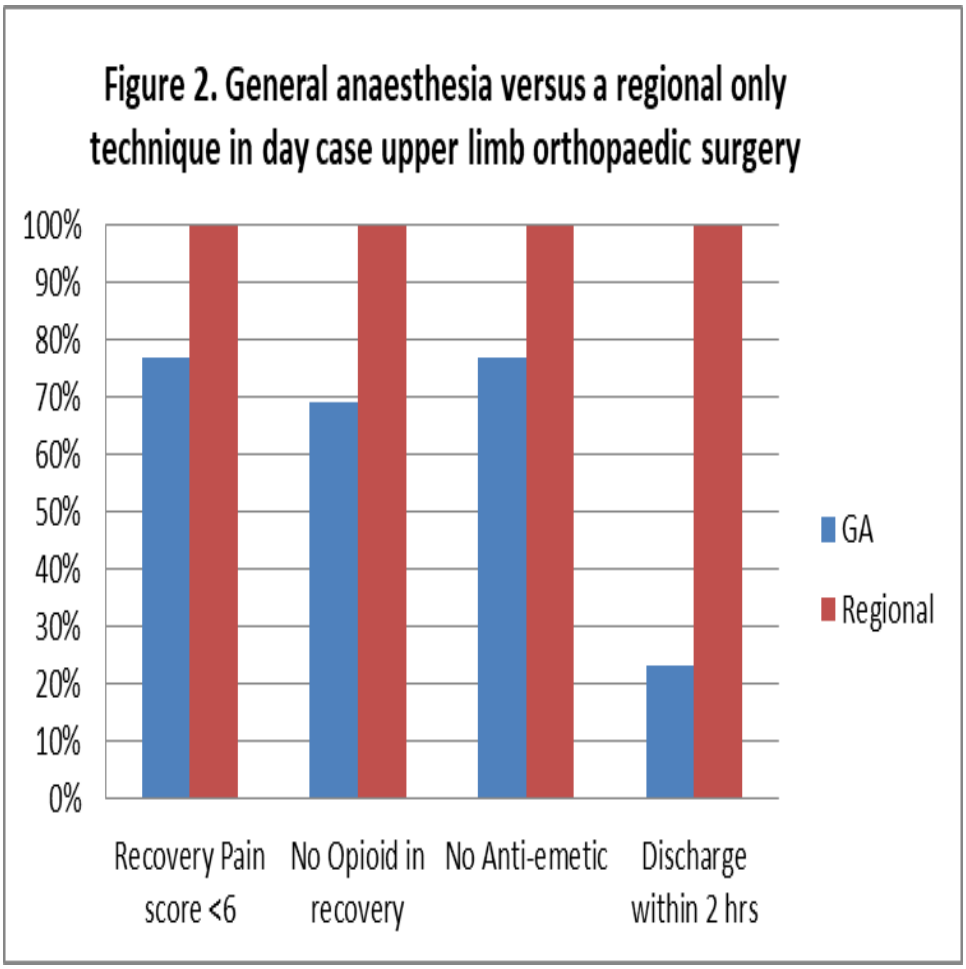
Results

Patient Experience
25 patients contacted



Clinical Outcomes

Sixty-one notes requested, 23 were excluded, leaving 13 general anaesthetic and 25 regional only. n=38



Discussion

We have demonstrated that a service that was developed with zero additional cost has improved clinical outcomes when compared to general anaesthesia and provides an excellent patient experience overall. It is common for patients' to have fixed pre-conceptions of awake surgery and frequently education and expectation management is required. We aim to use this work to reassure future patients and inform them of the benefits of regional only techniques.

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Poster No: 15

Becoming future ready - devising training outcomes in regional anaesthesia for postgraduate trainees based on a survey of current practices.

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Abstract

Introduction: In accordance with GMC guidance[1], the RCoA must define specialty specific training outcomes in regional anaesthesia for CCT holders. Our department lead was approached by the RCoA to recommend ways in which training can enable one to perform blocks independently. As a baseline, we surveyed senior trainees to explore current exposure and confidence in regional techniques.

Methods: A 22 question survey was emailed to ST5-7 trainees across UK. The level of training in regional anaesthesia (intermediate/higher/advanced) was established, along with the number of blocks performed across a range of thoraco-abdominal, upper and lower limb blocks. Analysis focussed on what influenced the confidence to practise independently at different stages of training.

Results: 149 results analysed, with fair distribution amongst regions and training grades. Tables 1 & 2 show the data-distribution for higher and advanced trainees respectively. 94% of advanced trainees feel confident using awake blocks independently while only 44% of higher trainees do. The higher trainees have good exposure to all types of blocks performed (eg. 5 variations of upper limb), but lower numbers of each block (average <10) as compared to advanced trainees who gain confidence by more numbers (average >10) of all blocks.

Discussion: We recommended that higher trainees achieve expertise in any 2 blocks in each anatomical region based on local best practice. We propose that higher training be focussed on mastering smaller number of essential regional techniques, so that all UK CCT holders possess skills sufficient for confident autonomous practice of regional anaesthesia.

	EXPOSURE TO INDIVIDUAL BLOCKS						LEVEL OF SUPERVISION NEEDED		
NOS / BLOCKS	0	1-5	6-10	11-20	21-30	>30	DIRECT	INDIRECT	DISTANT
UPPER LIMB/BRACHIAL PLEXUS BLOCKS									
INTERSCALENE	3	20	19	29	22	7	24	27	49
SUPRACLAVICULAR	14	29	34	8	10	5	39	25	36
INFRACLAVICULAR	58	31	8	0	2	2	85	10	5
AXILLARY	7	25	22	17	10	19	24	29	47
PERIPHERAL NERVE BLOCK	8	25	27	19	15	5	NR	NR	NR
LOWER LIMB/LUMBOSACRAL PLEXUS BLOCKS									
FASCIA ILIACA	2	8	8	20	24	37	5	8	86
FEMORAL NERVE	2	10	7	20	25	36	5	3	92
POPLITEOSCIATIC	3	14	25	31	15	12	14	19	68
ADDUCTOR CANAL	15	25	27	20	10	2	31	17	53
ANKLE BLOCK	7	31	32	14	7	10	19	17	64
TRUNK/PARANEURAXIAL NERVE BLOCKS									
THORACIC/PARAVERTEBRAL	42	36	14	3	2	3	71	19	10
SERRATUS PLANE	69	25	3	0	0	2	76	17	7
PECS	64	27	7	0	0	2	73	22	3
QUADRATUS LUMBORUM	80	12	7	0	2	0	83	10	7
TRANS. ABDOMINUS PLANE	3	12	12	25	17	31	5	10	85
RECTUS SHEATH	12	39	24	12	7	7	31	19	51
CONFIDENCE IN INDEPENDENT PRACTICE									
WOULD PERFORM AWAKE REGIONAL TECHNIQUE FOR HAND SURGERY									44
WOULD PERFORM REGIONAL AND GENERAL ANAESTHESIA BOTH									41
WOULD NOT BE COMFORTABLE PERFORMING A REGIONAL BLOCK ALONE									15

TABLE 1: PERCENTAGE DISTRIBUTION OF SKILL AND CONFIDENCE IN PERFORMING UPPER LIMB, LOWER LIMB AND TRUNK BLOCKS IN TRAINEES WHO HAVE COMPLETED HIGHER TRAINING MODULE (59 TRAINEES OUT OF 149)

	EXPOSURE TO INDIVIDUAL BLOCKS						LEVEL OF SUPERVISION NEEDED		
NOS / BLOCKS	0	1-5	6-10	11-20	21-30	>30	DIRECT	INDIRECT	DISTANT
UPPER LIMB/BRACHIAL PLEXUS BLOCKS									
INTERSCALENE	0	0	12	12	6	71	2	6	82
SUPRACLAVICULAR	0	0	18	24	18	41	6	24	71
INFRACLAVICULAR	29	24	12	12	6	18	35	29	35
AXILLARY	0	0	6	6	18	71	6	6	88
PERIPHERAL NERVE BLOCK	0	12	12	6	12	59	NR	NR	NR
LOWER LIMB/LUMBOSACRAL PLEXUS BLOCKS									
FASCIA ILIACA	0	0	6	6	18	71	0	6	94
FEMORAL NERVE	0	0	6	24	18	53	0	0	100
POPLITEOSCIATIC	0	18	0	12	12	59	12	12	76
ADDUCTOR CANAL	0	6	24	29	6	35	6	12	82
ANKLE BLOCK	0	0	24	29	18	29	6	12	82
TRUNK/PARANEURAXIAL NERVE BLOCKS									
THORACIC/PARAVERTEBRAL	6	29	18	18	12	18	41	24	35
SERRATUS PLANE	41	29	18	6	0	6	41	6	53
PECS	29	18	35	6	6	6	29	18	53
QUADRATUS LUMBORUM	59	24	6	6	0	6	47	35	18
TRANS. ABDOMINUS PLANE	0	0	0	24	24	53	0	6	94
RECTUS SHEATH	12	24	24	29	6	6	6	18	76
CONFIDENCE IN INDEPENDENT PRACTICE									
WOULD PERFORM AWAKE REGIONAL TECHNIQUE FOR PERIPHERAL LIMB SURGERY									94
WOULD PERFORM REGIONAL AND GENERAL ANAESTHESIA									0
WOULD NOT BE HAPPY TO PERFORM A REGIONAL BLOCK ALONE									6

TABLE 2: PERCENTAGE DISTRIBUTION OF SKILL AND CONFIDENCE IN PERFORMING UPPER LIMB, LOWER LIMB AND TRUNK BLOCKS IN TRAINEES WHO HAVE COMPLETED ADCVANCED TRAINING MODULES (17 TRAINEES OUT OF 149)

References

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Poster No: 16

A Timely Reminder of Untimely Spinal Anaesthesia

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Abstract

Introduction

We present a case of markedly prolonged spinal anaesthesia in a patient undergoing emergency caesarean section.

Case

The fit and well 32-year-old lady had previously undergone two caesarean sections under spinal anaesthesia without incident. A 25G Sprotte needle was used to administer 2.4ml 0.5% Hyperbaric Bupivacaine and 300mcg Diamorphine at L4-5. A sensory block from T3-S3 on the left and T4-S3 on the right was achieved, with a Bromage score of 3. The operation was completed uneventfully.

At 8 hours post spinal she had a sensory block to T12 and a profound motor block, reflexes were normal and plantars downgoing. After 11 hours there was minimal improvement in neurology; an MRI lumbosacral spine was reassuringly normal. At 15 hours power had improved to a bromage score of 2, and sensory block to T10. At 29 hours there remained a mild reduction in power of hip flexion, and by 33 hours she had made a full recovery.

Discussion

A literature review identified eight similar reports of prolonged neurological deficit after spinal anaesthetic followed by complete resolution, with no clear cause identified[1-8]. This rare phenomenon appears to occur regardless of needle type and local anaesthetic.

Whilst it is encouraging patients with concerning neurology can make a full recovery, persistent neurology is a 'red flag' sign of several severe neurological complications. Delay in diagnosis and treatment is strongly linked with progression to permanent deficit. It is essential that hospitals have protocols to rapidly identify potentially reversible underlying pathology.

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Poster No: 17

Pecs I + II with serratus anterior blocks versus local infiltration for breast cancer surgery under general anaesthesia

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Abstract

Introduction: Opiates are extensively used in breast cancer surgery. The use of opiates may drive tumorigenesis and metastasis by promoting angiogenesis, suppressing immunity and facilitating proliferation (1,2). Regional anaesthetic blocks pre-operatively may provide sufficient analgesia to decrease opiate use (3) and persistent post-surgical pain (4). For full area coverage in breast surgery, pecs I and II, and serratus anterior blocks should suffice (5,6).

Methods: In this retrospective notes review we examined patients who had surgery under general anaesthesia with either surgical local anaesthetic infiltration (Infiltration) or pecs I+II and serratus anterior blocks (Blocks). All patients presenting for breast cancer surgery between August 2016 and October 2018 in Ninewells Hospital were considered, with those undergoing pre-op guidewire insertion or immediate plastics reconstruction excluded. Intra-operative and post-operative analgesic requirements were measured. All opiates used were converted to oral morphine equivalent (OME) for analysis. Caldicott approval was obtained.

Results: There were 42 patients included. Preliminary results are recorded in table.

	Blocks	Infiltration
Population Characteristics		
Number (%)	21 (50%)	21 (50%)
Age [iQR]	63 [53,73]	56 [52,67]
ASA [iQR]	2 [2,2]	2 [1.75,2]
Procedure: wide local excision	7	9
Procedure: mastectomy	14	12
Length of stay [iQR]	2 [1,2]	2 [2,2.75]
NEWS pain score [iQR]	0 [0,1]	0 [0,0]
Opiate Use		
Intra-operative no (% of cohort)	21 (100%)	21 (100%)
Intra-operative average dose OME (mg)	13.4	17.2
Recovery no (% of cohort)	3 (14%)	4 (19%)
Recovery average dose OME (mg)	10	8
Ward no (% of cohort)	9 (43%)	2 (10%)
Adjuvant Use		
Intra-operative:		
Ketorolac no (%)	1 (5%)	3 (14%)
Clonidine no (%)	1 (5%)	4 (19%)
Paracetamol no (%)	7 (33%)	8 (38%)
Ward:		
Paracetamol no (%)	18 (86%)	18 (86%)
NSAIDs no (%)	0 (0%)	7 (33%)

Discussion: Our preliminary results suggest regional anaesthesia is not inferior to surgical infiltration. The block group required less peri-operative opiates and adjuvants, however they use more opioids on the ward. This may partially be explained by differing prescribing preferences between weak opioids and NSAIDs. We do not have data on the incidence of pre-existing or chronic pain indicated by pre-operative use of opioids.

In conclusion, the use of regional blocks may reduce the need for peri-operative opioids, potentially lowering the risk of metastasis, recurrence and persistent post-surgical pain.

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Poster No: 18

Survey on Attitudes to Continuous Peripheral Nerve Blockade in Trauma

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Abstract

Introduction

In the context of military trauma, Continuous Peripheral Nerve Blockade (CPNB) provides effective analgesia during prolonged casualty evacuation and where complex injury patterns require repeated surgical procedures.

During recent operations in Iraq and Afghanistan CPNB resulted in improved pain outcomes without increased infection[i],[ii],[iii],[iv]. Following this, Defence Medical Services recommend CPNB as part of a multimodal analgesia strategy within deployed hospital care[v].

Methods

An online survey using RedCAP was distributed to consultant and trainee anaesthetists in all locations with defence trainees; this remained open for one month in July 2018. We examined exposure to CPNB and confidence to perform relevant regional techniques as well as exploring attitudes to CPNB risks and benefits.

Results

We received 190 replies, including responses from 10 Major Trauma Centres. 149/190 respondents (78.4%) advocated the use of CPNB in trauma. Despite this, only 10.5% surveyed regularly placed CPNB catheters, with most rarely or never using CPNB (58.2%).

Discussion

Lack of infrastructure and concerns regarding infection risk and failure to diagnose compartment syndrome remain barriers to widespread uptake of CPNB. This suggests that evidence [iii],[vi],[vii] refuting these issues are not widely known or accepted.

Military consultants appeared more confident in performing CPNB when compared to Civilian consultants, possibly suggesting operational exposure or training. However the problem of maintaining currency in this advanced skill needs to be addressed. It may be that pre-deployment training/simulation can provide the answer.

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Poster No: 19

Awake Ankle Surgery Under Ultrasound Guided Ankle Block: Patient Perspective

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Abstract

Introduction

Elective foot surgery is often conducted in the day-case setting and ultrasound-guided ankle block can facilitate anaesthesia, analgesia and early discharge.[1] However, information about patient understanding of nerve blocks and awake surgery is limited. We aimed to understand patients' expectations and experience of undergoing awake surgery under ankle block.

Methods

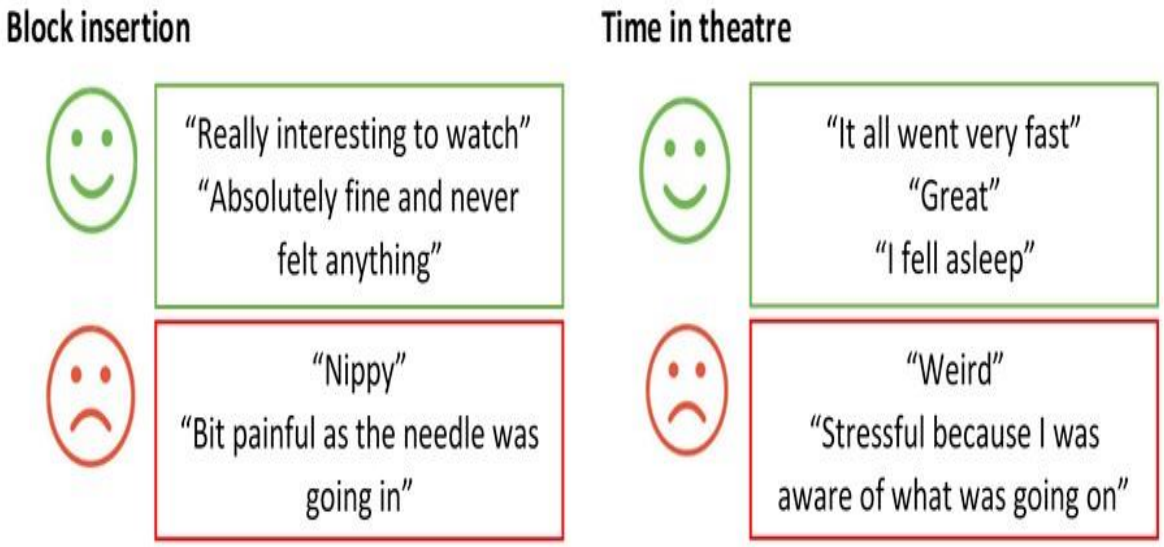
Local clinical governance team confirmed ethical approval was not required. Oral and written information was given before obtaining informed consent from 23 patients undergoing foot procedures. An experienced anaesthetist performed the ultrasound-guided ankle blocks using 0.75% ropivacaine. Demographic data was collected. Patients were telephoned 48 hours later and interviewed using a semi-structured questionnaire.

Results

20 patients (87%) received sedation with titrated doses of intravenous midazolam. 3 patients (13%) required intra-operative supplementation with local anaesthetic infiltration by the surgeon. 21 (91%) patients were day cases. 5 patients (22%) reported discomfort with block insertion (descriptors in figure). Intra-operative experience was positive for the majority of patients (87%). Block duration was variable; most (78%) felt pain on block regression was acceptable but 5 (22%) patients experienced difficulty with pain management. Patients appreciated avoiding GA: "no nausea", "not woozy." Some reported pre-operative apprehension. However, all were satisfied with the pre-operative information and said they would have the same again.

Discussion

A predominantly positive peri-operative patient experience is encouraging. Pain management on block regression can be challenging. Awake surgery still represents a source of pre-operative anxiety, and further pre-operative education is a potential solution.



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Poster No: 20

Survey of junior surgeons' knowledge about local anaesthetics in a Singaporean healthcare cluster

Rachel Huiqi Seet[1], Sing Ying Pang[1], Jun Hoe Tay[1], Shu Yan Divya Ang[2], Natesha Eusoof Angullia[1], Wan Jane Liew[1], Prit Anand Singh[3,4]

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Abstract

Introduction

Local anaesthetics (LA) are frequently used amongst surgical and anaesthetic junior doctors. It is therefore imperative for both groups to be familiar with the safe use of LA and management of toxicity. Our local cluster of hospitals (SingHealth, Singapore) adopts doses as published by El-Boghdadly et al[1].

A prior study[2] by Royal College of Surgeons England assessed surgical and anaesthetist trainees' knowledge of LA use and toxicity. Our project investigates this amongst a similar target demographic in SingHealth.

Methods

103 surgical junior doctors across 3 tertiary SingHealth hospitals, of varying subspecialties and grades, were approached to complete a questionnaire designed by the team. The surveys were completed under direct supervision to prevent respondents from verifying their answers.

Results

83% (85/103) of respondents reported at least weekly use of LA. 63% (65/103) and 33% (29/89) respectively were able to identify the correct maximum safe doses for lignocaine and bupivacaine. 41% (42/103) correctly identified toxicity treatment. 78% (80/103) recognised at least 2 out of 3, and 13% (14/103) recognised all 3 accurate options for signs of toxicity.

Discussion

Significant knowledge gaps were identified amongst the cohort regarding LA use and management of LA toxicity. There is a trend suggesting that the more experienced surgical trainees are more familiar with LA use. Guidance of safe doses can be provided through implementation of simple visual tools in relevant settings, or enhanced education such as simulation-based training targeting LA use and toxicity.

Please direct any correspondence to Dr Singh PA (singh.prit.anand@singhealth.com.sg)

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Poster No: 21

Use of Virtual Reality to improve patient experience for awake upper limb surgery under regional anaesthesia

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Abstract

Introduction

Virtual Reality (VR) is a method of distraction providing the user with the illusion or perception of being immersed within a three-dimensional, computer generated environment. Moon et al[1] demonstrated that patients preferred VR to midazolam sedation when undergoing endoscopic urological surgery.

This patient satisfaction survey was developed to assess feasibility of implementing VR for awake patients undergoing upper limb orthopaedic procedures.

Methods

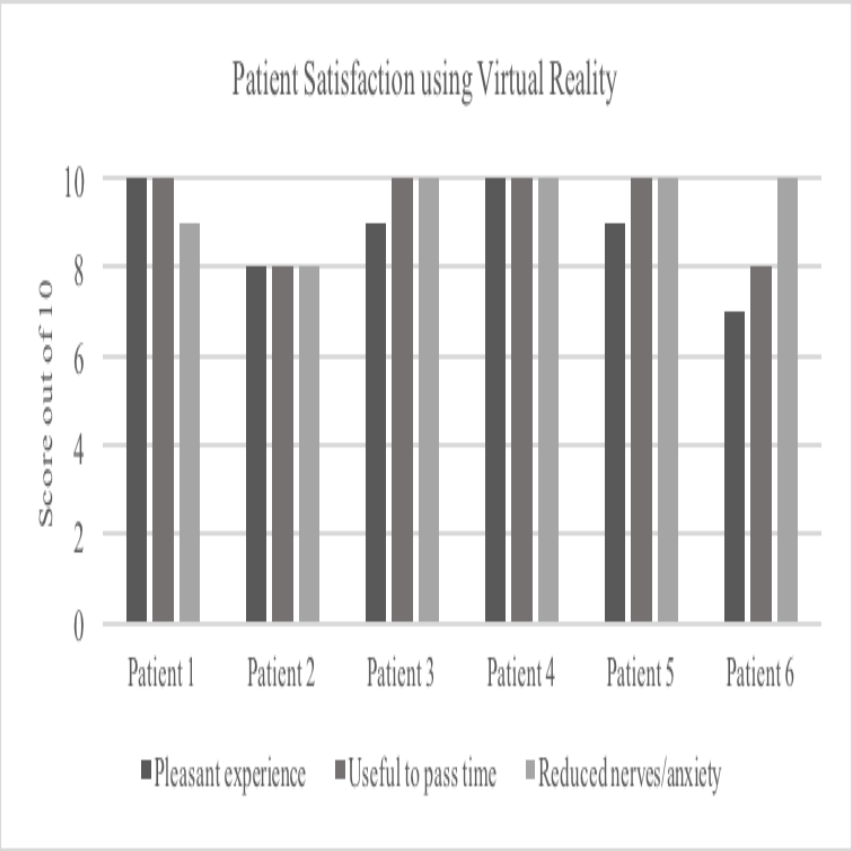
VR was utilised on two operating lists for patients undergoing awake upper limb surgery. The VR environment was provided by Google Daydream via a Samsung Galaxy Note9 mobile phone and a Virtoba X5 Elite 3D VR headset.

Patients completed a questionnaire following the procedure. Additional data on patient demographics, positioning, duration of surgery and time under VR were also recorded.

Results

Six patients participated in this project. Average age was 60.7 years; 80% were female.

Figure 1 shows results of survey.



All of the participants would recommend this to others and would use the VR technology again themselves. Adverse effects reported related to the weight of the device and one patient felt uncomfortably warm. Average time spent under VR was 31.5minutes, with maximum duration of 75minutes. One patient removed the device before the end of the procedure.

Discussion

Patients consistently reported a positive experience with VR distraction. It was an effective adjunct to reduce sedation in regional anaesthesia while still maintaining a high level of user satisfaction. VR was easily applied to patients for short procedures and was found to cause minimum disruption to the theatre environment.

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Poster No: 22

Supra-Inguinal Fascia Iliaca Compartment Block for Knee Replacement: A case series

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Royal Gwent Hospital, Newport, United Kingdom

Abstract

Introduction

Knee replacement has significant risk of chronic post surgical pain (up to 53%), one key risk factor for this is lower quality post surgical pain control[i].

Our current practice is sub arachnoid block with intrathecal morphine, plus adductor canal block and local infiltration of the posterior capsule.

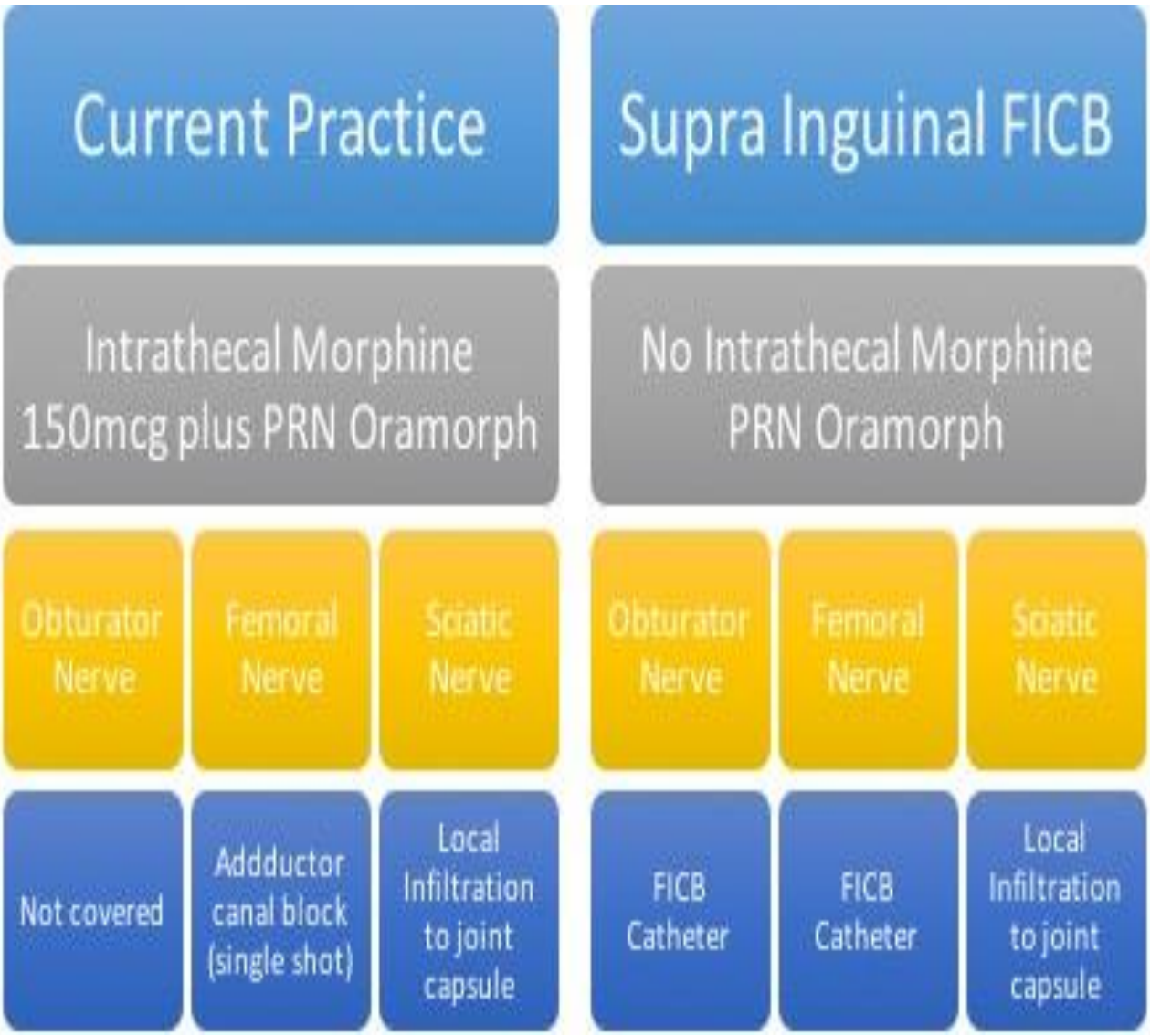
Addition of obturator nerve block to a femoral triangle block improves perioperative pain control, however our current practice does not cover the obturator nerve.[ii][iii]

Supra inguinal fascia iliaca compartment block (SIFICB) provides obturator, femoral, and lateral femoral cutaneous nerve block, improves analgesia after total hip replacement, and is used in our trust for analgesia for fractured neck of femur.[iv][v]

Case series

7 Patients underwent knee replacement with subarachnoid block with no intrathecal morphine using SIFICB and catheter placement to provide 0.5% Lignocaine/1:200,000 adrenaline at 8ml/hour via an elastomeric pump.

We then reviewed their physiotherapy notes, pain scores, acute pain team visits, and post operative morphine doses to ascertain their effectiveness and look for any complications.



Discussion

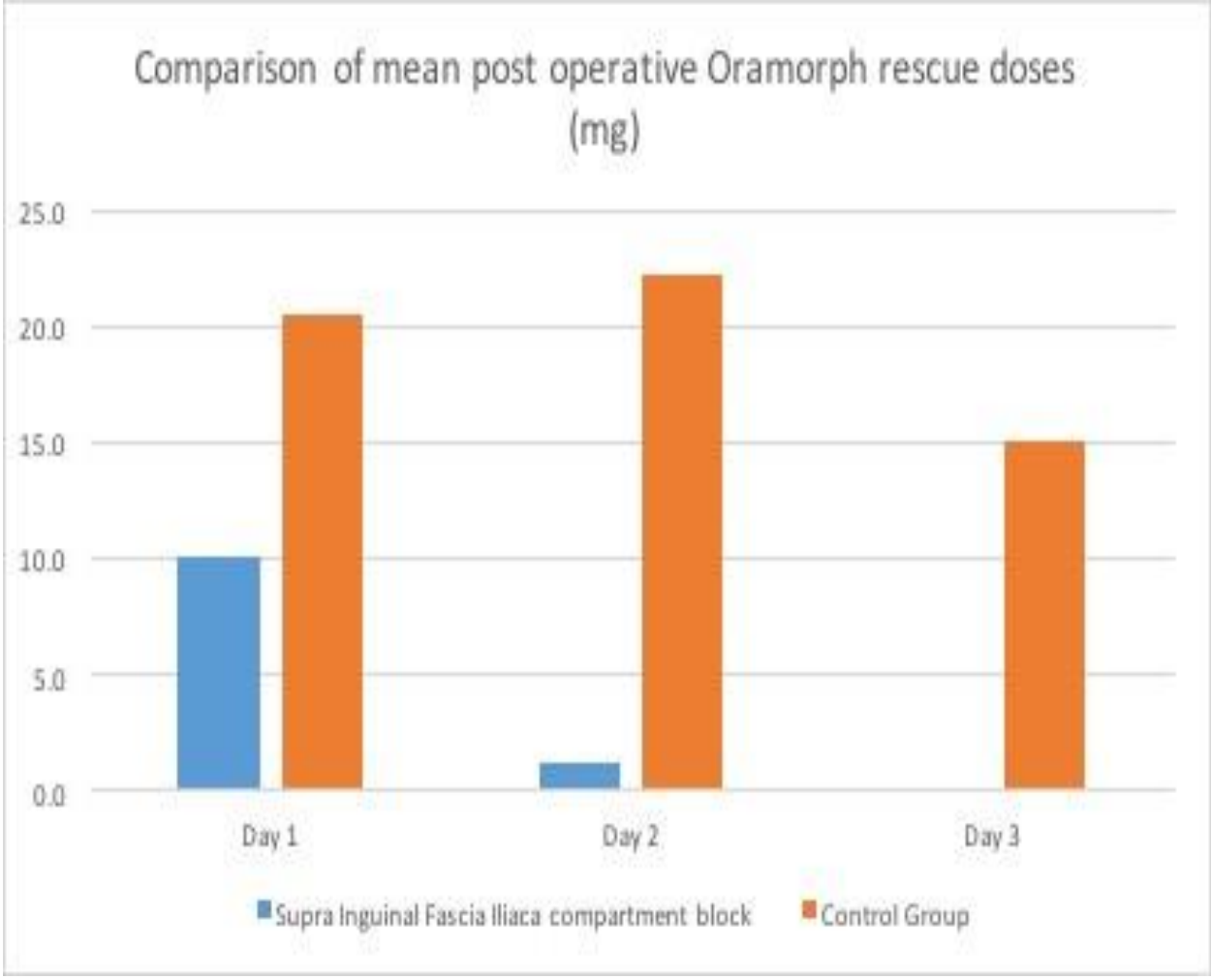
All patients were able to mobilise and engage with physiotherapy, implying that a low concentration SIFICB does not create limiting motor weakness.

No adverse events were recorded.

No failures of analgesia, with lower mean post operative morphine usage, showing SIFICB can provide effective analgesia for knee replacement.

Significant Itching in control group, not SIFICB group.

In summary this case series shows that SIFICB catheters show promise as a post operative analgesic technique for knee replacement, and warrant further research.



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Poster No: 23

Using a combined paravertebral and pecto-intercostal fascial plane block for awake breast surgery to reduce post-operative morbidity.

Sara Ko, Maryam Zaky, Amit Pawa

Guys and St Thomas's Hospital , London, United Kingdom

Abstract

Introduction: Combined thoracic paravertebral and pectoral nerve blocks has been cited[1,2,3,4] as an effective technique for breast surgery. We present a case of a high-risk ASA 4 patient who successfully underwent surgery with regional anaesthesia and conscious sedation.

Case: A 61 years old female requiring mastectomy and axillary lymph node clearance due to left breast carcinoma. Significant medical background of chronic hypoxia and right heart failure on home oxygen as a result of interstitial lung disease and emphysema. Multidisciplinary team agreement to avoid general anaesthesia due to high risk of respiratory complications and death.

Regional anaesthesia performed after sedation with low-dose midazolam and fentanyl. Paravertebral block undertaken using real-time ultrasound scan with 20ml of solution containing 10ml 2% lidocaine with 1/200,000 adrenaline and 10ml 0.5% levobupivacaine. Following this, PECS 2 block was sited using 30ml of solution containing 10ml 1% lidocaine with 1/200,000 adrenaline, 10ml 0.25% levobupivacaine and 10ml 0.9% saline. 5ml 1% lidocaine was administered for the pecto-intercostal fascial block (PIFB).

Intra-operatively, conscious sedation with Propofol Target Controlled Infusion (TCI). Only a total of 50mcg fentanyl required throughout as supplemental analgesia. Good post-operative pain control achieved with single dose of dihydrocodeine and regular oral paracetamol and ibuprofen. Patient discharged after 48 hours of level 1 care.

Discussion: We have demonstrated the feasibility of using regional anaesthesia for achieving good result for breast surgery with axillary lymph clearance. Wider utilisation of this can effectively avoid patients needing ITU admissions and potential perioperative complications that might have resulted from general anaesthesia.

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Poster No: 24

An audit of the timing, administration and effectiveness of single shot Fascia Iliaca Blocks in the analgesic management of patients with hip fracture

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[1]Northumbria Hospitals, Newcastle Upon Tyne, United Kingdom. [2]Northumbria Healthcare, Newcastle Upon Tyne, United Kingdom

Abstract

Introduction

NICE and the AAGBI recommend nerve blocks for pain management in hip fractures. Routinely in our hospital, all patients with hip fracture in A&E receive a landmark fascia iliaca block (FIB). However, the landmark technique efficacy is questionable (1), and a recent patient safety alert highlighted the danger of opiate administration prior to nerve blocks(2). We evaluated the timing, effectiveness and safety of the FIBs.

Methods

Retrospective review of patients admitted with hip fracture. Timing of diagnostic x-ray, analgesia administration, and FIB performance were correlated with pain scores in the first 24 hours of admission. Analgesia doses were converted to oral morphine equivalents for comparison(3).

Results

39 out of 43 patients received FIB in A&E. After diagnostic x-ray, patients waited on average 122.92±13.80 minutes for the block. Average pain scores were between 1-2 in the first 24 hours after block, with an average oral morphine administration of 4.9mg±0.9mg and 7.5mg±1.60mg in 0-12 hours and 12-24 hours after admission. Four patients received between 5-10mg IV morphine within 40 minutes of FIB. Four patients had persistent high pain scores after FIB, requiring rescue analgesia.

Discussion

FIBs in A&E are effective as analgesia for hip fracture. Most patients received FIB, but after a prolonged wait. Opioids administered during this wait could compromise patient safety. We highlighted these issues to A&E and recommended that FIB be a priority after diagnosis. After identifying ineffective blocks in this cohort, a ‘rescue block’ service is being considered.

References

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Poster No: 25

Ankle and foot surgery: are we consistently numb? Acute pain management review for foot and ankle surgery in teaching hospital

Anna Cormack, John Stewart, William Scott

Glasgow Royal Infirmary, Glasgow, United Kingdom

Abstract

Introduction:

Pain after foot and ankle surgery (FAS) can influence the postoperative outcomes and prolong inpatient stay. [1] Regional anaesthesia (RA) should be utilised in all extensive surgical procedures for foot and ankle [2]. We have reviewed pain management of patients undergoing elective FAS in large teaching hospital over six months aiming to evaluate RA provision, immediate post-operative and 24h breakthrough analgesic requirements. Our goal is that **all** patients undergoing these procedures should have access to **effective** RA.

Methods:

Retrospective review of electronic case-notes of the patients undergoing elective FAS in large teaching hospital. Ethical approval was not required (service development project).

Results:

52 patients underwent FAS in the studied period, 69% were females and 31% males. 65% of patients were taking opioid-containing or neuropathic medications prior to surgery (18% are long-acting opioids). 47 patients (90%) had RA utilised for intra-operative and post-operative pain management (chart 1). 35% of patients required IV opioids in the immediate postoperative period, more commonly when RA was performed by non-RA specialist (58% v 29% - chart 2), 36% of the patients having RA required breakthrough opioids in first 24h and 40% in no-RA group.

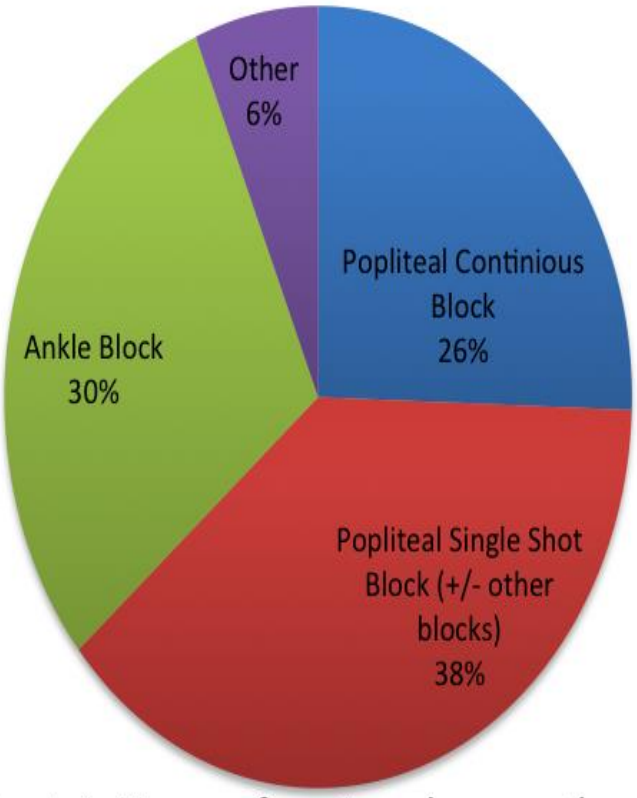

Chart 1. Type of regional anaesthesia

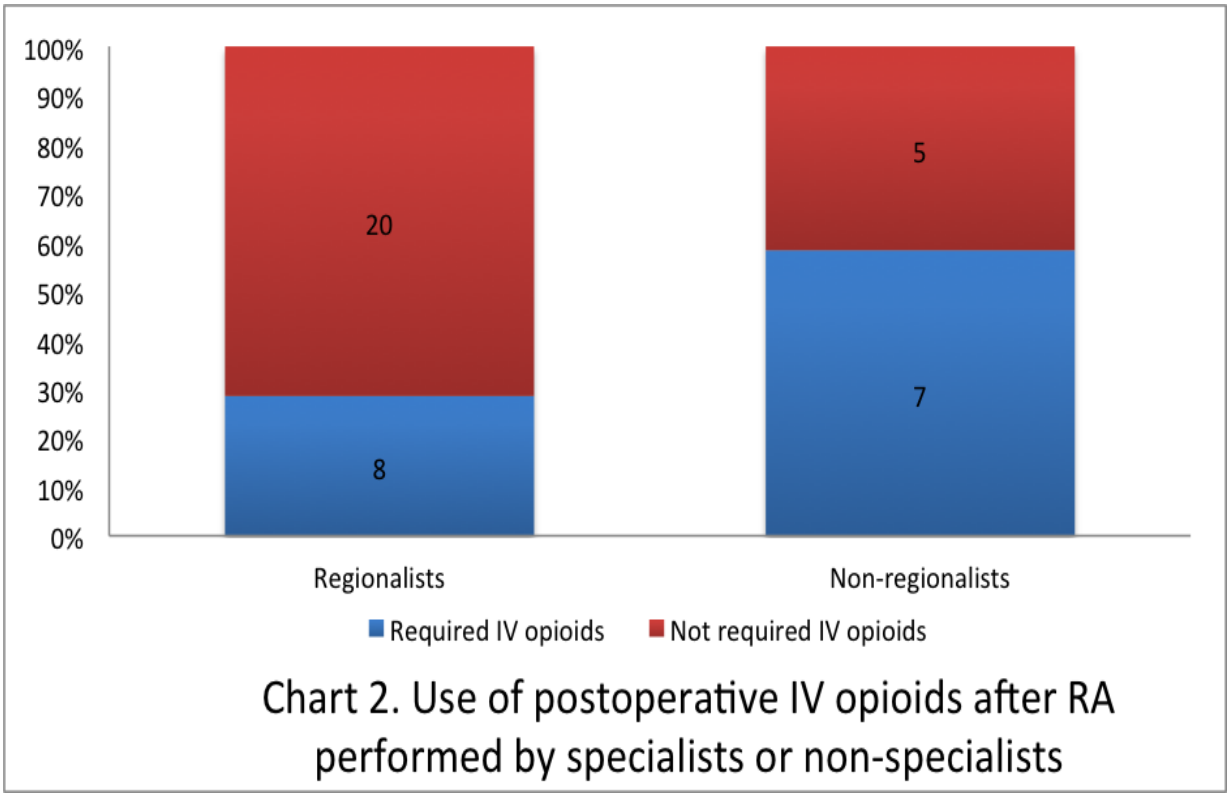

Chart 2. Use of postoperative IV opioids after RA performed by specialists or non-specialists

Discussion:

RA was utilised in 90% cases, and where it was not provided it was mainly due to patient and surgical factors. Immediate postoperative opioid requirements were more likely if RA was performed by non-specialist. 24h opioids requirements where mainly dependent on surgical procedure. We conclude that FAS lists should be always covered with RA-specialists to deliver effective service.

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Poster No: 26

Pre-existing chronic pain and foot and ankle surgery: are we blocking it?

John Stewart, Anna Cormack, William Scott

Glasgow Royal Infirmary, Glasgow, United Kingdom

Abstract

Introduction

Foot and ankle surgery (FAS) is heterogeneous group of the procedures where regional anaesthesia (RA) is commonly used for acute pain management[1]. Acute pain in postoperative period is independent risk factor for developing chronic pain (CP) in patients undergoing these procedures[2] so effective perioperative analgesia is paramount. Patients with CP might present unique challenges in acute pain management[3] but we could not identify if that is applicable to FAS. We conducted six months retrospective review of the perioperative pain management of patients undergoing FAS to identify issues in management of patients with pre-existing CP.

Methods

Retrospective review of electronic case-notes of the patients undergoing elective FAS in large teaching hospital. Ethical approval was not required (quality improvement project).

Results

52 patients underwent FAS in the studied period (69% females, 31% males). 15 patients (65%) were taking opioid-containing or neuropathic medications prior to surgery (18% - long-acting opioids, 27% - neuropathic medications) (chart 1). All patients identified with pre-existing CP had RA. Five patients (33%) in the CP subgroup had postoperative IV opioids, and 13 (35%) in no pre-existing CP subgroup. 24h strong opioid breakthrough use was similar in patients with CP and no CP subgroups (40% and 35% respectively). Use of long-acting opioids post-operatively was higher in CP patients (40% v 8% in no CP patients) (chart2).

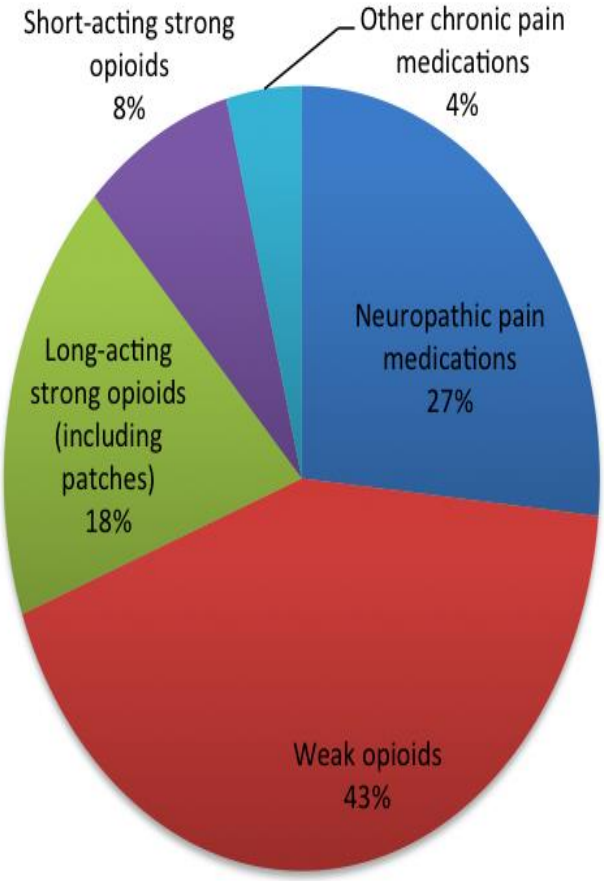

Chart 1. Pre-operative used of opioid-containing and neuroparthic medicationgs

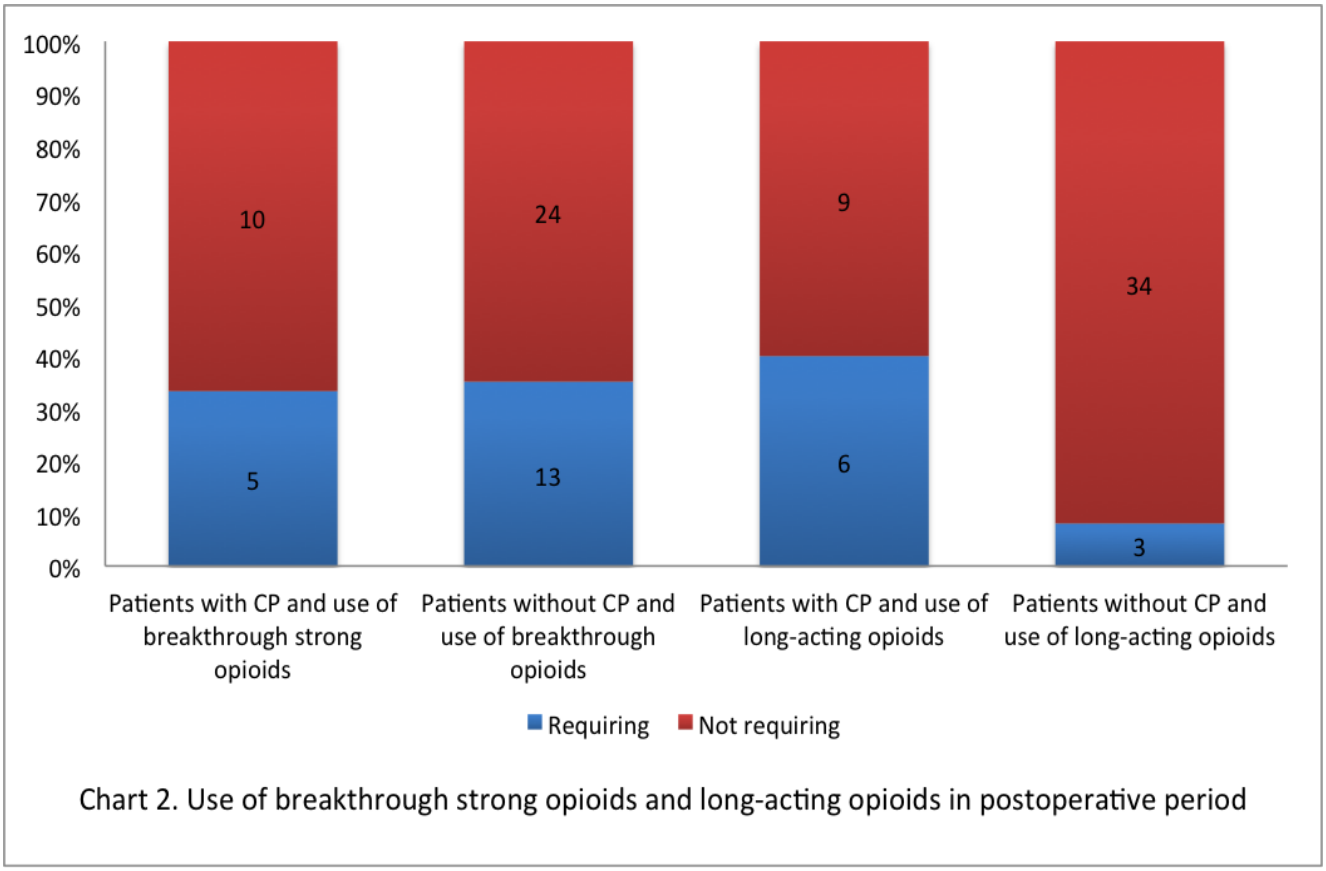

Chart 2. Use of breakthrough strong opioids and long-acting opioids in postoperative period

Discussion

Acute pain management was comparable in patients with CP to patients without. Combination of RA and continuation of pre-operative medications are key aspects of successful pain management in those patients.

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Poster No: 27

Continuous popliteal nerve block for foot and ankle surgery: is it worth the effort?

Anna Cormack, John Stewart, William Scott

Glasgow Royal Infirmary, Glasgow, United Kingdom

Abstract

Introduction:

Studies suggested superior analgesia from continuous popliteal nerve block (CPNB) technique for foot and ankle surgery (FAS) [1]. In our institution we routinely use CPNB for both day-cases and patients requiring in-patient stay. We have conducted six months retrospective review to compare analgesic efficacy and safety of the technique with single shot popliteal nerve block (SSPNB).

Methods:

Retrospective review of electronic case-notes of the patients undergoing elective FAS in large teaching hospital. Ethical approval was not required (service evaluation project).

Results:

52 patients were included in the studied period. 12 patients (22%) had CPNB and 18 patients (35%) had SSPNB (+/- supplemental block). Only 3 patients (25%) required IV opioids in the immediate postoperative period in the CPNB subgroup, while in the SSPNB subgroup 7 patients (39%) required them. 24h breakthrough opioid requirements were higher in SSPNB subgroup compared to CPNB (50% v 33% respectively) (chart1). Mean stay in CPNB subgroup was 1.66 days (range: 1-4), and 1.35 days in SSPNB subgroup (range 0-4). Type of the procedure influenced RA technique: in most extensive surgical procedures CPNB was used (chart2). There were no safety risk episodes with continuous local anaesthetic infusion during studied period.

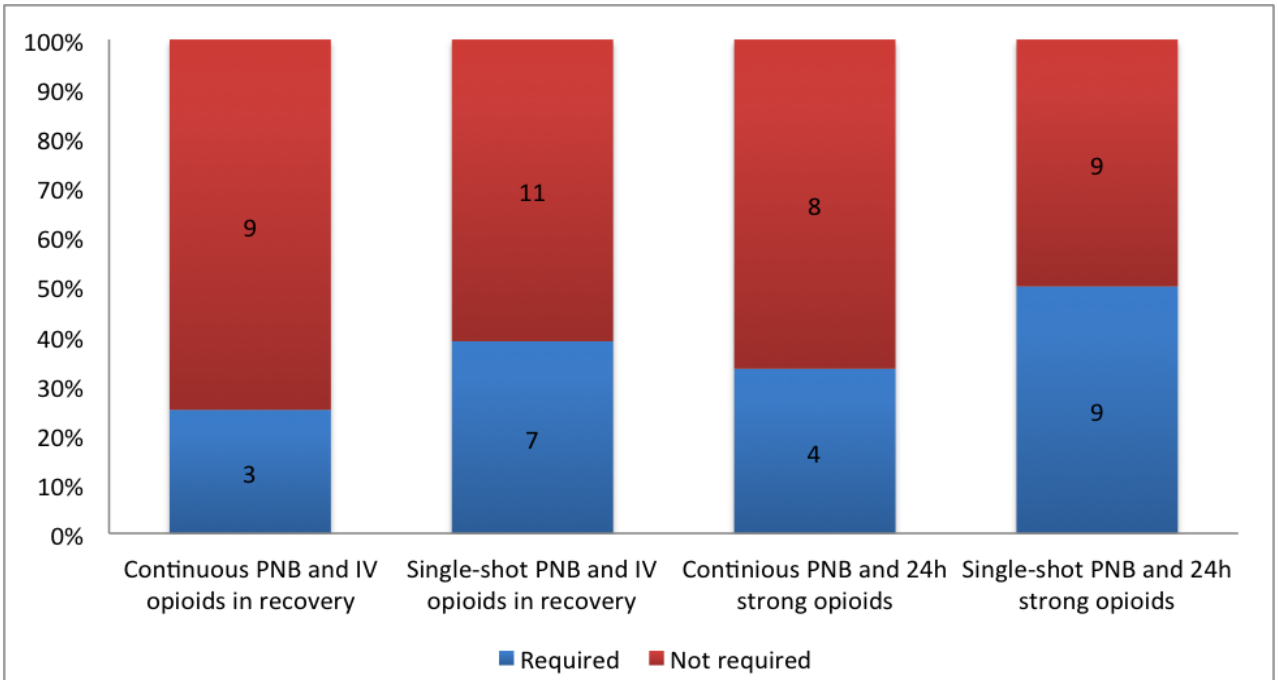

Chart 1. Comparison of IV opioids requirement in immediate post-operative period and breakthrough strong opioids in first 24h after surgery

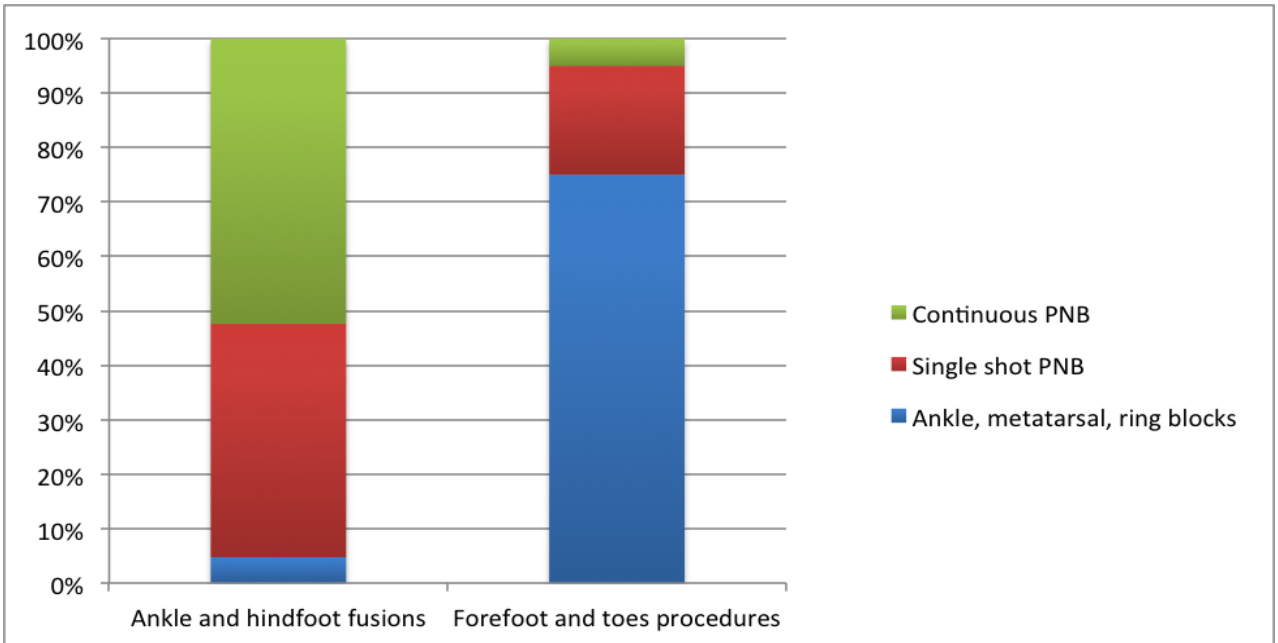

Chart 2. Type of surgery and regional anaesthesia technique

Discussion:

CPNB is useful technique for effective and safe postoperative pain management in FAS. It showed lower IV opioid requirements in immediate post-operative period as well as reduced number of patients requiring breakthrough strong opioids in first 24h after surgery even in view that CPNB were more often used in extensive procedures.

References

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Poster No: 28

The forgotten stakeholder in a regional anaesthesia service

Matthew Harry Thompson, Nidhi Gautam, Toby Ashken, Su Cheen Ng

University College Hospital, London, United Kingdom

Abstract

Introduction

The introduction of a dedicated regional anaesthesia (RA) service is intended to improve patient experience, patient outcomes, turnover of theatre list, and cost. Many of these predicted impacts have been studied and assessed in the literature[1-3]. Our institution introduced a RA service via a block room model of care. Our theatre recovery staff are heavily affected by the increase in RA patients and this has not previously been looked at. Recovery staff can also provide important insight into the patient's immediate post-operative period. We sought the opinions of our recovery staff to assess the impact on their workload and their patient's care.

Methods

We designed a questionnaire to ascertain the views of our recovery nurses during a one-week period. It was manually distributed on paper format and anonymously collected.

Results

Fig 1 – Table of results

Question	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Blocked patients require less pain relief	3%	0%	23%	37%	37%
Blocked patients have less PONV	3%	10%	23%	30%	33%
Blocked patients quickly discharged from recovery	0%	7%	7%	50%	37%
Blocked patients are discharged home faster	0%	7%	20%	40%	33%
Blocked patients are easier to care for in recovery	3%	7%	0%	60%	30%
Have had enough teaching to safely take care	10%	17%	7%	43%	23%
Recommend a nerve block to friends/family	0%	0%	17%	53%	30%
Like working in theatres with dedicated block room & service	0%	3%	3%	67%	27%
Improvement in post op recovery after block service initiated	0%	0%	13%	67%	20%

#

Discussion

Our results showed an overwhelmingly positive attitude of recovery staff towards our RA service. They have seen a beneficial impact on both patient care and their own workload. An impressive 83% of recovery nurses would recommend a block to their family or friends. Two important points arose from our study. Firstly, we identified a subset of nurses who felt they would benefit from additional training to better care for post-operative RA patients. Secondly, the nurses would like to have access to written information to provide patients. This project has highlighted the benefits of staying engaged with this often-forgotten group of professionals to further improve the safety and quality of our service.

References

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Poster No: 29

Evaluating upper limb block performance in a regional plastic surgery centre

Alon Kramer

Broomfield Hospital, Chelmsford, United Kingdom

Abstract

Introduction

Broomfield Hospital, in South-East England, is a regional Plastics centre covering a population of 3.2 million. Annually, approximately 1300 upper limb blocks are performed. A baseline service evaluation was carried out with a view to implementing quality improvement.

Methods

Between 15th February and 15th March 2019, adult patients having awake elective or urgent upper limb plastic surgery using a brachial plexus block were included. The clinical notes were reviewed and 2 to 3 days following the procedure a telephone call was made to the patient.

Results

42 patients were included. 74% were axillary brachial plexus blocks, the remaining supraclavicular. Local anaesthetic mixtures were most commonly 1 or 2% lidocaine with 0.25% or 0.5% bupivacaine and adrenaline, from 20 to 45 mls total volume. Sedation was used in 69% of cases predominantly midazolam.

Consent[1] and documentation[2] are important issues. This was sparse, for example, 12% of cases did not specify the approach to the brachial plexus. 90% of patients reported they did not receive written information, though it was available[3].

There were no conversions to general anaesthesia, 4 patients experienced mild discomfort intra-operatively and 3 required additional local anaesthesia. Mean self-reported analgesia time was 11.5 hours, ranging 2 to 30 hours. Mean satisfaction score was 9.0 out of 10.

Discussion

Satisfaction and success rates are high. Use of additives into block mixtures could extend analgesia time. Documentation of consent and conduct of block requires improvement. Using a pre-printed sticker and ensuring provision of written information is likely to improve care.

References

References

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Poster No: 30

Improving Management of Perioperative Local Anaesthetic Systemic Toxicity: A Survey & Improvement Project

Michael Li[1], Luke Martin[1], Sanjoy Saha[2]

[1]UCL Medical School, London, United Kingdom. [2]Royal Free Hospital, London, United Kingdom

Abstract

Introduction: Local anaesthetics (LA) are widely used perioperatively for regional anaesthesia, wound infiltration, and as an intravenous infusion. Local Anaesthetic Systemic Toxicity (LAST) is a rare but potentially life-threatening complication of LA use with a specific management guideline set out by the AAGBI.[1] This project aimed to improve perioperative management of LAST using a survey to identify key areas to implement change.

Methods: An anonymous 7-point questionnaire was designed which asked the maximum dosage of LAs used in the trust, dosage of intralipid, and location of intralipid, cardiac arrest trolleys and LAST management guidelines in our 3 separate theatre sites. These were distributed to theatre staff and data collected over 3 days.

Results: There were 61 respondents (31 anaesthetists, 5 surgeons, 25 anaesthetic nurses). Approximately 80% of anaesthetists answered the question of maximum dose for lidocaine, bupivacaine and levobupivacaine (without adrenaline) as 3mg/kg, 2mg/kg and 2mg/kg respectively. The mode (range) maximum total dose of LA anaesthetists would use for a 125kg patient for lidocaine was 400mg (150-600mg), bupivacaine 250mg (75-250mg) and levobupivacaine 250mg (75-250mg).

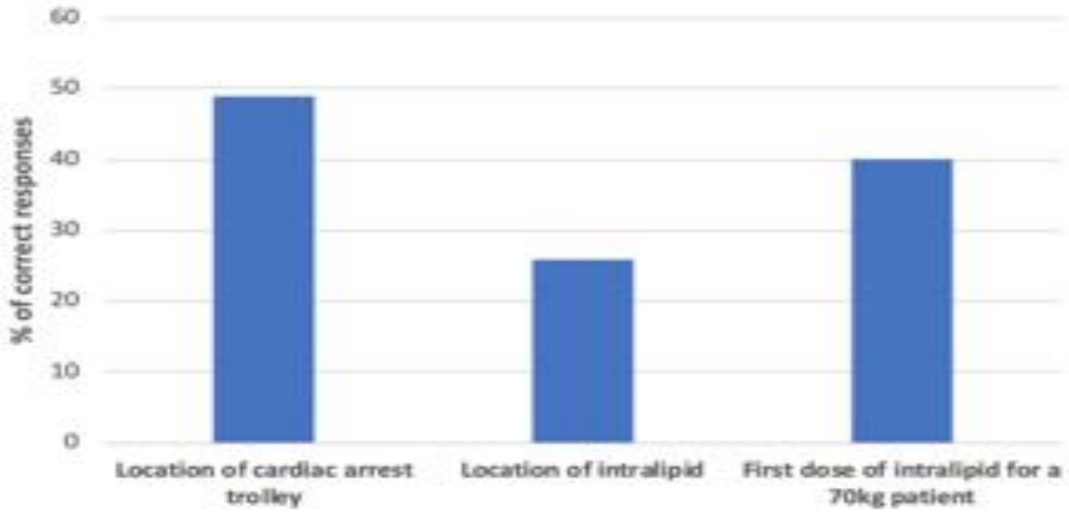

Fig. 1 Percentage of respondents who correctly identified the location of cardiac arrest trolleys, intralipid, and 1st dose of intralipid for a 70kg patient across all sites.

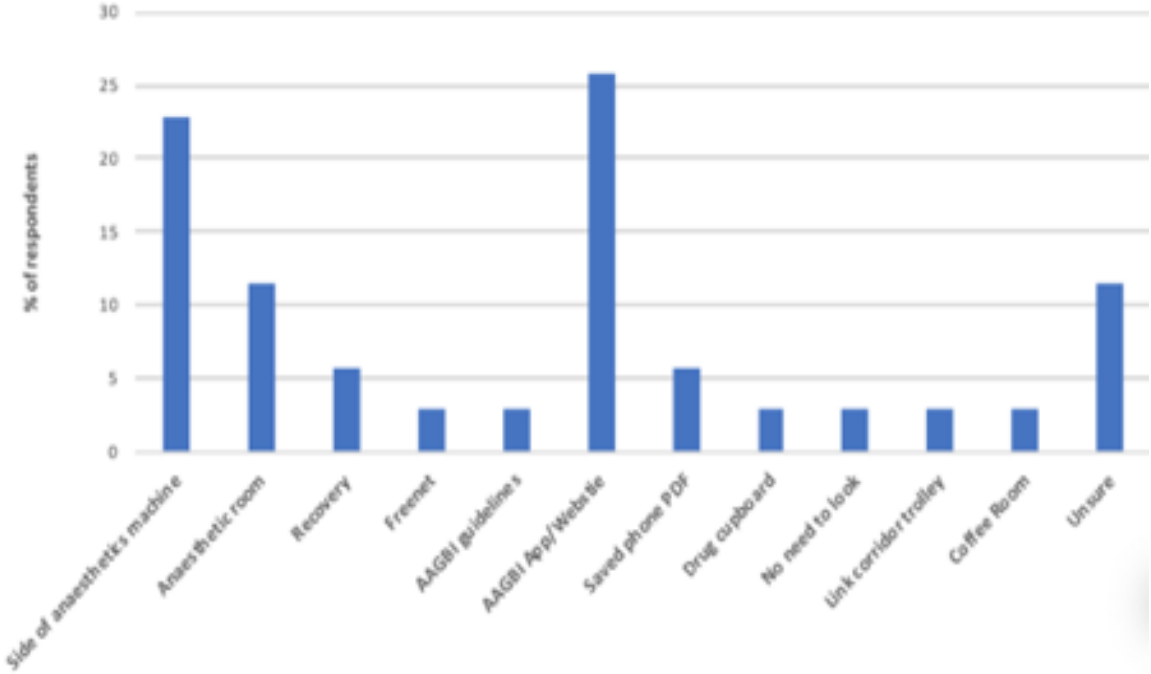

Fig. 2 Locations anaesthetists and surgeons would first look for LAST guidelines (no designated place to be kept in each theatre).

Discussions: This project demonstrated variable knowledge in local anaesthetic dosing; location of intralipid, the cardiac arrest trolley and a lack of LAST (and other emergency) guidelines in each theatre. The results were presented at our audit meeting; subsequently the AAGBI emergency quick reference handbook has been placed in every theatre.[2] We plan to conduct an in-situ LAST simulation and repeat the survey to identify areas for further improvements.

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Poster No: 31

Sphenopalatine Ganglion Block as an Alternative Modality for Management of Post-Dural Puncture Headache: a Case Series

Christine Greene, Louise Moran, Eric Korba

Letterkenny University Hospital, Letterkenny, Co. Donegal, Ireland

Abstract

Introduction:

Post-dural puncture headache (PDPH) is a well-recognised complication of neuraxial anaesthesia. To date, conservative management and use of an Epidural Blood Patch (EBP) has been the mainstay of treatment.[1] Sphenopalatine Ganglion Block (SPGB) is a minimally invasive technique which can be carried out at the bedside and has been associated with effective analgesia & better safety profile versus conventional EBP.[2]

Cases:

Five patients (4 female, 16-40 yrs) with PDPH were included. Three patients had spinal anaesthesia, one epidural and one had a lumbar puncture. Symptom onset ranged from day 1-4 post-dural puncture. All patients received conservative treatment (IV fluids, regular analgesia, caffeine) and were offered either SPGB or EBP. SPGB was performed day 2-6 post-dural puncture. Either 3-7.5mL 0.5% L-Bupivacaine (in 4/5) or 4% Lignocaine (1/5) was administered. Four of five patients achieved immediate symptomatic relief post-SPGB, assessed using the visual analogue scale. Two of five achieved symptomatic relief after a single SPGB & were discharged. Two received a repeat SPGB for ongoing symptoms. Finally, two were then given an EBP for ongoing symptoms post-SPGB. SPGB was well tolerated by all five and no adverse effects of SPGB were reported.

Discussion:

The current case series are consistent with the few reports in the literature on SPGB, demonstrating it to be an effective and safe treatment option in the management of PDPH[3]. Given the favourable safety profile, efficacy and minimally invasive nature of SPGB, further research assessing the role of SPGB as an initial treatment modality in PDPH is warranted.

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Poster No: 32

Consenting and documentation for regional anaesthesia

Yolande Squire[1], James Lloyd[1], Muthuraja Marimuthu[2], David Burckett- St.Laurent [1]

[1]Royal Gwent Hospital, Newport, United Kingdom. [2]Royal Gwent Hospital, Newport , United Kingdom

Abstract

Anaesthetists are routinely performing peripheral nerve blocks either in combination with a general anaesthetic or as a sole technique. Recent studies have highlighted a need for more formal framework and documentation of these procedures, from the consent discussions to the handover and recovery of these patients[1].

There is national guidance on consent for anaesthesia, which includes obtaining consent prior to the day of surgery, the use of visual and written aids about the procedure, a clear explanation of the risks, benefits and alternatives, and an opportunity to ask any questions[2,4]. This is essential to enable patients to make autonomous and informed decisions about their care, however recall and understanding of this process amongst patients has been shown to be poor[1].

Thorough recording and handover of the regional anaesthetic technique used is another essential part of safe practice. It is also highlighted in NatSSIPs[3]. With the increasing use of "block room" models and high turnover lists this is even more important to avoid adverse events.

To improve these issues locally we have developed a peri-operative document for patients receiving regional anaesthesia. The aim of this is to facilitate a more formalised consent process and to streamline the patients care from the pre operative work up through to a safe and more rigorous hand over to recovery. We hope that this will improve our patient care and enable a more consistent and safe approach to the ever growing field of regional anaesthesia.

Regional Anaesthesia Record

Aneurin Bevan University Health Board

Patient Addressograph

Date ___/___/_____ Time ___:___
Surgeon _____
Surgery _____
Anaesthetist _____
Block _____
Intention ☐ Anaesthesia ☐ Analgesia
Referral ☐ Elective Surgery ☐ Emergency Surgery ☐ Acute Pain

Pre-Operative Assessment

P mg / mg BP Sats % Kg BMI
ECG cm

ASA 1 2 3 4
Diff Airway Y / N
Exist Neuro Y / N
Prev GA Y / N
Probs Y / N
PONV Y / N
Fasted Y / N
Food
Water
Diabetes Y / N
CBG
Hb
WCC
Plat
INR
Elec Issue Y / N
Na
K
Urea
Creat
eGFR

Medication

Anticoagulation Y / N
Last dose __/__/____ Time __:__

Allergies

Patient risks and preparation

☐ Block failure and secondary plan ☐ Prolonged block ☐ Bleeding ☐ Bruising
☐ Infection ☐ Allergic reaction ☐ Pain at injection site
☐ Permanent nerve damage 1/5000 (0.0002%) ☐ Temporary nerve damage ☐ Damage to surrounding structures
Other _____
☐ **Procedure explained** including risks, benefits and alternatives such as general anaesthesia and not proceeding with surgery
☐ Leaflet read or explained ☐ Regional video watched ☐ Previous regional ☐ Screened for research
☐ Conscious sedation explained, including possibility of recall
☐ Advice given to safeguard anaesthetised area and to take oral pain relief before anaesthesia wears off
Anaesthetist's name Sign Date / /

Consent

I understand:
1. The information given about the regional anaesthetic, as described on this form
2. That a particular person can't be guaranteed to perform the procedure, but that the person will have appropriate experience
3. That I have had the opportunity to discuss the details of the anaesthetic with an anaesthetist
4. That any procedure in addition to those described on this form will only be carried out if it is necessary to save my life or prevent serious harm to my health
5. That anonymous data will be collected about my anaesthetic for use in service improvement

I agree and consent to the anaesthetic as described on this form

Patient's name (PRINT) _____
Patient's signature Date / /

Block 1

Type Laterality
☐ Skin Prep with Chlorhexidine 0.5%
☐ Skin Infiltration
Needle type _____ Gauge ____G
☐ Ultrasound ☐ Landmark ☐ Nerve Stim
☐ In plane ☐ Out of plane
☐ Absence of symptoms on Injection
☐ Resistance ☐ Paraesthesia ☐ Pain
Performed by: _____

Block 2

Type Laterality
☐ Skin Prep with Chlorhexidine 0.5%
☐ Skin Infiltration
Needle type _____ Gauge ____G
☐ Ultrasound ☐ Landmark ☐ Nerve Stim
☐ In plane ☐ Out of plane
☐ Absence of symptoms on Injection
☐ Resistance ☐ Paraesthesia ☐ Pain
Performed by: _____

Block 3

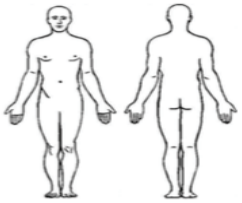
Type Laterality
☐ Skin Prep with Chlorhexidine 0.5%
☐ Skin Infiltration
Needle type _____ Gauge ____G
☐ Ultrasound ☐ Landmark ☐ Nerve Stim
☐ In plane ☐ Out of plane
☐ Absence of symptoms on Injection
☐ Resistance ☐ Paraesthesia ☐ Pain
Performed by: _____

Block 4

Type Laterality
☐ Skin Prep with Chlorhexidine 0.5%
☐ Skin Infiltration
Needle type _____ Gauge ____G
☐ Ultrasound ☐ Landmark ☐ Nerve Stim
☐ In plane ☐ Out of plane
☐ Absence of symptoms on Injection
☐ Resistance ☐ Paraesthesia ☐ Pain
Performed by: _____

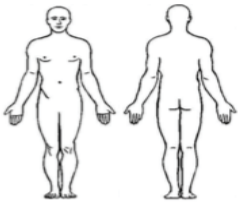
Additional Information

Block Adequacy



Block tested and adequate for surgery ☐
Top-up required ☐
Unable to produce anaesthetic block ☐

Pre-existing neurology



Further details, including any motor weakness:
_____
_____
_____
_____
_____
_____

STOP BEFORE YOU BLOCK ☐ Team Brief ☐ Surgical Site Mark ☐ Block Site Mark ☐ Equipment check ☐ IV Access ☐ Mandatory Monitoring

Peri-operative observations

IVI											
Drugs											
180											
170											
160											
150											
140											
130											
120											
110											
100											
90											
80											
70											
60											
50											
40											
30											
20											
Time											
SpO2											
FiO2											
CO2											
ET Agent											
RR											
Temp											
Tourniquet											

Intra Operative course

☐ **Patient comfortable throughout procedure**
☐ **Further analgesia offered:** Accepted ☐ Declined ☐
☐ **G.A. offered:** Accepted ☐ **Airway:** **Grade:** **Circuit:** **Agents:**
Declined ☐

Further Information

Recovery and Ward Handover

Airway

Time removed: ____:____
☐ **Unsupported** ☐ **Jaw Thrust** ☐ **Guedel**
☐ **Waters Circuit** ☐ **Hudson Mask** ☐ **Nasal**
☐ **Supraglottic** ☐ **ET Tube**

180											
170											
160											
150											
140											
130											
120											
110											
100											
90											
80											
70											
60											
50											
40											
30											
20											
Time											
SpO2											
FiO2											
CO2											
RR											
Temp											
Nausea											
Vomiting											
CBG											
Urine Vol											
Drain 1											
Drain 2											
CBG											
Limb:											
Colour											
Sensory											
Motor											
Bromage											

Conscious Level

☐ Awake ☐ Sedated and responds to voice
☐ Unresponsive ☐ Sedated and responds to pain
Time awake and oriented: ___:___

IV Access Site: Size:

Discharge

VIP Score 0 1 2 3 4 5
Pain Score 0 1 2 3
Discharge Score ___
NEWS Score ___
Wound site information:

Ward Handover

☐ **Patient feedback completed in database prior to discharge**

VTE Prophylaxis: ☐ Yes ☐ No ☐ NA
TTO/Fit note: ☐ Yes ☐ No ☐ NA
Fluid Plan: ☐ Oral ☐ IV
Medication Plan:
Post Op plan:

Special Instructions / Concerns:

Ward Nurse: Signature:

Recovered by

Signature: _____
Recovery Practitioner: _____

References

1. Zarnegar R et al. Patient perceptions and recall of consent for regional anaesthesia compared with consent for surgery. J R Soc Med. 2015 Nov;108(11):451-6

2. Association of Anaesthetists of Great Britain and Ireland. AAGBI: Consent for anaesthesia 2017. Anaesthesia 2017; 72: 93-105.

3. NHS England patient Safety Domain [Internet]. National safety standards for invasive procedures. London: NHS England, 2015.

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Poster No: 33

Local Anaesthetic Systemic Toxicity Grab Boxes

Will Watson, James Small, Sonya McKinlay

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Abstract

Local anaesthetic systemic toxicity (LAST) is a rare, but serious complication of administrating local anaesthetic agents. The rate of toxicity is 1.2-11 per 10000 anaesthetics, for epidural and 2.5-9.8 per 10000 for peripheral nerve blocks.[1]The AAGBI have published guidelines on the identification and management of LAST, which involve the administration of lipid emulsion therapy in weight based doses.[2]

We carried out a survey of 25 Consultant and 7 trainee anaesthetists who were asked the location of the nearest Lipid emulsion therapy at two sites in GRI theatres.

The correct location was identified by 7(22%) anaesthetists at the first site and 5(16%) anaesthetists at the second site.

We have created LAST Grab Boxes. These are clearly labeled and contain the AAGBI guideline, a weight based dosage sheet for initial dose, double dose and maximum allowed volume of lipid emulsion therapy, along with all of the required equipment. They have been placed in a number of areas including Theatre recovery, Labour Ward and Intensive care.

Also, we have created a 'Learnpro' module which incorporates knowledge of the location of LAST Grab Boxes along with use of the AAGBI guideline for treatment. We feel this should be compulsory for staff working in areas where this treatment may be required and could be used to measure staff engagement and knowledge improvement.

Once established, we would wish to repeat a staff survey to show an improvement in knowledge of the location of Lipid Emulsion Therapy and treatment of LAST.

References

1. Local anaesthetic systemic toxicity Christie LE, Picard J, Weinberg GL. BJA Education, 15 (3): 136–142 (2015)
2. AAGBI – Management of Severe local Anaesthetic Toxicity. Available from https://www.aagbi.org/sites/default/files/la_toxicity_2010_0.pdf

Poster No: 34

Survey of practice: What is blocking us stopping?

Sean Speers, Alison Schulte

Royal Sussex County Hospital, Brighton, United Kingdom

Abstract

Introduction

Following the recommendations made by the Healthcare safety investigation branch analysis of wrong site nerve blocks in 2018 (1), we introduced a simplified Stop Before You Block (SBYB) process :

1.**Both** the anaesthetist and the ODP must be involved.

2.The side is confirmed by **both** people with the surgical marking and consent form.

3.The SBYB moment takes place **immediately** before needle insertion.

Methods

We designed a questionnaire with 8 statements to assess effectiveness and emailed the SurveyMonkey to 173 anaesthetists and ODPs.

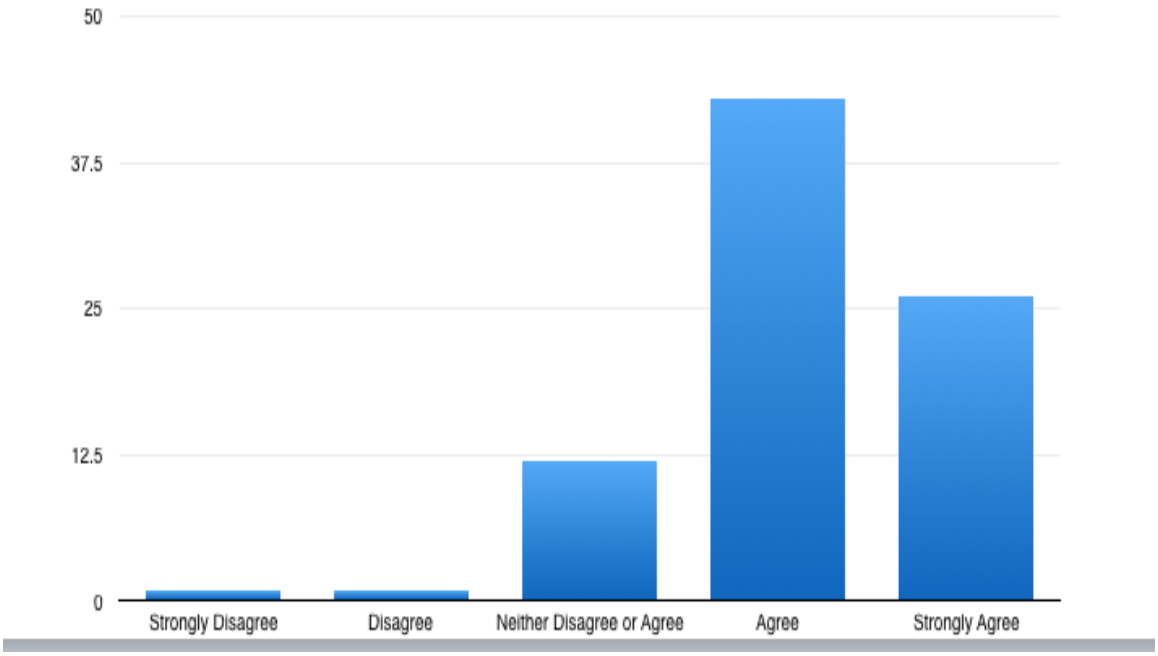
Results

There was a 49% response rate (n=84). 86% said they agreed they were fully aware of the new changes to procedure. 34% said they agreed the changes had removed variation amongst practitioners. 15 % said they had witnessed SBYB omissions.

Table 1: Survey questions and responses

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree	Weighted Average	Total Respondents
I am fully aware of the details of the new SBYB process at BSUH	4	4	4	42	30	4.07	84
The new process is clear to understand and has been easy to introduce into my practice	0	1	14	42	26	4.12	83
The new process has removed variation in SBYB practice amongst different practitioners	1	7	47	22	6	3.3	83
The new process has significantly increased the length of time required to perform a block	19	42	17	2	1	2.06	81
Despite the new process, I have witnessed SBYB refusals or omissions	20	33	18	11	1	2.28	83
I feel the two-person confirmation technique is a useful additional safety layer to prevent wrong site blocks	1	1	12	43	26	4.11	83
I would like to see additional safety features such as extra markings, special tape or similar	27	28	14	12	2	2.20	83
If you are an ODP: I feel empowered to withhold assistance if the SBYB moment is not performed	0	1	1	7	9	4.33	18

Graph 1 : "I feel the two-person confirmation technique is a useful additional safety layer to prevent wrong site blocks"



Discussion

We hoped that by simplifying, standardising and publicising the process we could improve the recall of the steps, empower all team members and reduce the variation of practice within the department. Despite results indicating good awareness of our new method and 83% of respondents agreeing or strongly agreeing that a two person technique was useful, we still found that 15% of respondents (n=12) reported omissions or refusals to perform SBYB. The majority (n=47) of respondents also felt that variation in practice had not changed.

Although we achieved good agreement and awareness over 4 months, it will take longer to internalise the practice by all involved, some of whom may only be occasional practitioners. We feel a consistent simplified, standardised and publicised message is the key.

References

1. (1) Healthcare Safety Investigation Branch. Administering a wrong site nerve block. 2018. https://www.hsib.org.uk/investigations-cases/administering-wrong-site-nerve-block (Accessed 30/03/2019)

Poster No: 35

Training in Regional Anaesthesia – could we do better? *A survey of ST7 trainees and new consultants in Mersey.*

Sharon Acheson

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Abstract

Introduction

The Royal College of Anaesthetists higher level training curriculum states that trainees should have an 'ability to perform both lower and upper limb plexus/regional blocks with distant supervision' (1). Too often a nerve block is performed unexpectantly and infrequently preventing consolidation of learning. The experience and confidence of supervising consultants is variable and surgeons are sometimes reluctant to allow nerve blocks reducing opportunities for learning.

Methods

I designed a survey of eight questions assessing confidence in performing a range of nerve blocks independently, factors that give confidence and barriers to regional anaesthesia being offered. The survey was sent to ST7 anaesthetic trainees and first year consultant anaesthetists in Mersey.

Results

Confidence in practice of regional anaesthesia was variable. Lack of confidence featured highly in barriers to offering regional anaesthesia. A number of respondents did not feel that their training had prepared them well for being able to perform regional anaesthesia as a consultant. Several respondents felt that a dedicated higher block of regional anaesthesia training would improve ability and confidence in regional anaesthesia.

Discussion

The current way in which training in regional anaesthesia is provided is inadequate in equipping future consultants to perform regional anaesthesia as part of their clinical practice. Proposed changes to training include a dedicated higher block of regional anaesthesia training to provide opportunities to consolidate skills.

References

1. Royal College of Anaesthetists. *CCT in Anaesthetics - Higher Level Training (Annex D).2nd ed.*2010. Available from https://www.rcoa.ac.uk/system/files/TRG-CCT-ANNEXD.pdf [Accessed 31st March 2019]

Poster No: 36

Severe emergence delirium following bilateral lower limb surgery under combined general and regional anaesthesia.

Gareth Gamble, Peter Merjavy

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Abstract

Introduction

Emergence delirium is a poorly understood, heterogenous condition affecting 0.25-4.7% of general anaesthetics (1,2). We report a case of severe emergence delirium following surgery under combined general and regional anaesthesia. The variability in terminology and diagnosis will be examined, along with the risk factors for emergence delirium and the role of regional anaesthesia.

Case

A 64-year-old gentleman was admitted following a fall from height, suffering bilateral lower limb fractures requiring operative repair. Anaesthesia was induced with propofol and maintained with sevoflurane and remifentanil infusion. At the end of the 3hr 40 minute procedure, bilateral ultrasound-guided adductor canal and popliteal blocks were performed. 30 minutes post-procedure, the patient became acutely agitated. He failed to respond to verbal de-escalation and required pharmacotherapy and presence of security to physical restrain him. Emergence delirium settled after three hours and he was monitored in HDU overnight.

Discussion

Delirium is defined as an acute or fluctuating course of mental status change, combined with inattention, and either an altered level of consciousness or disorganized thinking. Emergence delirium is a well-recognised but poorly defined syndrome occurring shortly after emergence from anaesthesia. There is a complex interplay between anaesthesia and surgery and the outcomes of emergence delirium, post-operative delirium and post-operative cognitive dysfunction. Identified risk factors for emergence delirium, complications resulting from emergence delirium and the role of regional anaesthesia will be discussed. The potential of local anaesthetic systemic toxicity as a cause of acute postoperative confusion following recent bilateral blocks will also be highlighted.

References

1) Fields et al. Agitation in adults in the post-anaesthesia care unit after general anaesthesia. Br J Anaesth. 2018;121(5):1052-1058.

2) Lepouse C et al. Emergence delirium in adults in the post-anaesthesia care unit. Br J Anaesth. 2006;96(6):747-53.

Poster No: 37

Audit of Stop before you Block (SBYB) practice: Improving patient safety

Dorita Noronha, Specialty Registrar in Anaesthesia, Prashant Kakodkar, Consultant Anaesthetist

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Abstract

Introduction:

'Stop before you Block' (SBYB) is a national Patient safety campaign initiated by Safe Anaesthesia Liaison Group & Regional Anaesthesia UK in 2010. It has been instrumental in preventing wrong site blocks classed as 'Never event' by NHS England (2015).

We assessed compliance with SBYB process in Trauma & Orthopaedics patients and its documentation in WHO Surgical Safety Checklist (SSC).

Methods:

25 blocks in 2 weeks (March 2019)

WHO checklists reviewed retrospectively in recovery

1.Sign in section led by anaesthetist or surgeon with a dedicated tick box for 'Correct side & site marked?'

2.'SBYB *immediately before needle insertion'* - Dedicated Stop moment section led by ODP

-Visualise surgical arrow

-Confirm side with patient (patient awake)

-Double check consent form (patient asleep)

-Local anaesthetic drug check

Results:

Correct side & site marked 100%

SBYB moment 92%

Discussion:

Our preventative measures already in place since 2017 are:

1.SBYB posters in anaesthetic rooms

2.Optional use of a visual SBYB prompt card covering ultrasound screen

3.Standardised SBYB section in WHO checklist

4.For upper limb blocks exposing patient's arm out of gown at Sign in as an extra definitive step to reinforce the process with the patient & team.

Follow up of 2 cases revealed human factors (distraction, communication, new staff) as likely causes.

We recommend anaesthetist to verbally state to ODP that a 'SBYB check is required' prior to completion of Sign in, encouraging colleagues to utilise visual prompt for inadvertent omission of Stop moment, increasing awareness/ education amongst new staff and emphasising on documentation in WHO checklist and anaesthetic record.

References

¸1) Safe Anaesthesia Liaison Group. Wrong Site Blocks During Surgery. London: Royal College of Anaesthetists; 2010
https://www.rcoa.ac.uk/document-store/wrong-site-blocks-during-surgery

2) French J, Bedforth N, Townsley P. NUH Stop Before You Block. London: Safe Anaesthesia Liaison Group and Regional Anaesthesia UK; 2010
https://ra-uk.org/index.php/stop-before-you-block

3) NHS England Patient Safety Domain. Never Events List 2015/16 Leeds: NHS England; 2015
https://www.england.nhs.uk/wp- content/uploads/201

4) National Patient Safety Agency. Never Events; Framework: Update for 2010-11, March 2010

5) National Patient Safety Agency. WHO Surgical Safety Checklist. Jan 2009.
https://www.nrls.npsa.nhs.uk/resources/?entryid45=59860

6) National Patient Safety Agency and Royal College of Surgeons of England. Patient briefing - correct site surgery. 2005.

Poster No: 39

Enhancing Enhanced Recovery: Implementation of Adductor Canal Blocks in Patients undergoing Total Knee Arthroplasty

AM Murphy, R Digney, R Barr

Altnagelvin Area Hospital, Altnagelvin, United Kingdom

Abstract

Introduction

Facilitation of early mobilisation and discharge are key goals of Enhanced Recovery Programmes (ERP) for patients having primary total knee replacements (TKR).[1] International evidence suggests there are additional practices, such as Adductor Canal Blocks (ACB), that may improve post-operative pain and advance achievement of these objectives.[2, 3] A significant driver for change was the positive impact of ACB in a similar local centre.

Methods

Following engagement of key stakeholders, baseline pain scores and analgesic requirements were collected from 22 patients undergoing TKR. During this time, the orthopaedic anaesthetic consultants received teaching and training to ensure attainment of confidence in performing ACB.

ACB were then implemented for all patients undergoing TKR in addition to the standard ERP.[4] The primary outcome measures are to improve pain scores and reduce consumption of rescue analgesia.

Results

The preliminary results (Table 1 and Figure 1) are extremely encouraging and suggest a significant improvement in pain scores following the implementation of ACB. It is hoped that this improvement will facilitate earlier mobilisation and reduced length of hospital stay.

Discussion

The implementation of ACB has not only improved patients' hospital experience, but also united the multidisciplinary team and encouraged improvements in other areas of the ERP journey. Physiotherapists are actively involved in achieving intensive therapy on the evening of surgery. Pharmacists are engaged in liaising with primary care to allow earlier

discharge. Utilising formal quality improvement methodology, we have successfully integrated new techniques into our practice with the goal of providing excellent patient care.

			Baseline Data	With ACB
	Number of patients		22	5
Median Pain Score (Numeric Rating Scale)	At rest	Day 0	3.5	0
		Day 1	4	0
		Day 2	3	1.5
	On movement	Day 0	8	3
		Day 1	7	4
		Day 2	7	6.5
Time Interval to Rescue Analgesia (hrs:mins)			07:15	08:55

Table 1. Results to date of median pain scores and time to rescue analgesia

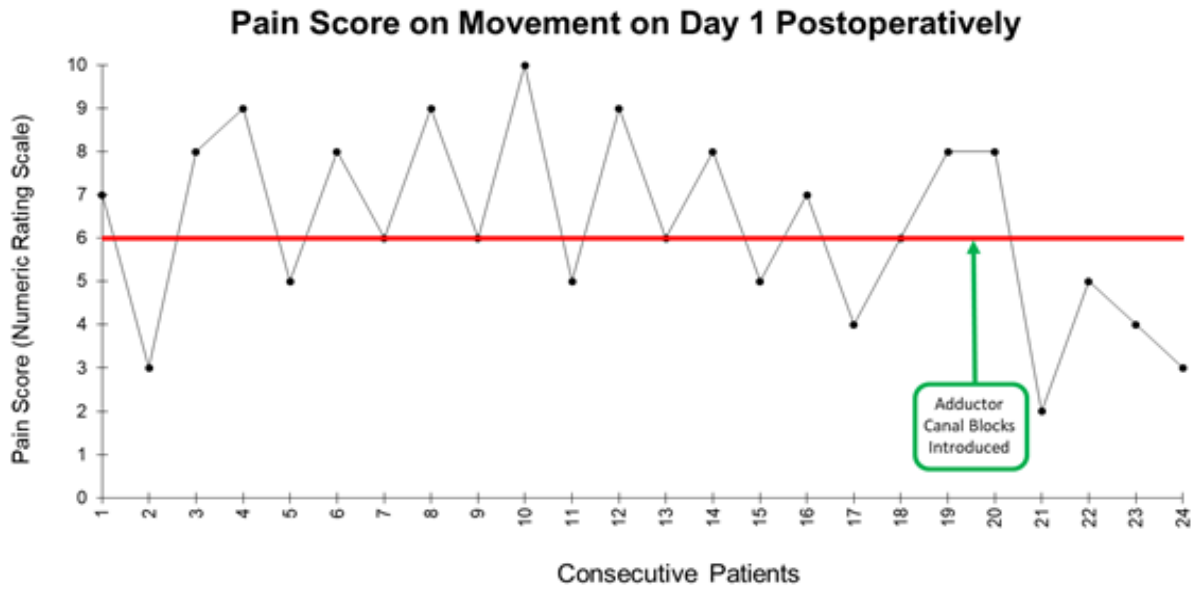

Figure 1. Run chart of pain scores on movement on Day 1 postoperatively

References

1. Aasvang EK, Luna IE, Kehlet H. Challenges in postdischarge function and recovery: the case of fast-track hip and knee arthroplasty. Br J of Anaesth. 2015; 115(6):861-866

2. Rasouli MR, Viscusi ER. Adductor canal block for knee surgeries: An emerging analgesic technique. Arch Bone Jt Surg. 2017; 5(3):131-132

3. Jiang X, Wang QQ, Wu CA, Tian W. Analgesic efficacy of adductor canal block in total knee arthroplasty: a meta-analysis and systematic review. Orthop Surg. 2016; 8:294-300

4. Western Heath and Social Care Trust. Enhanced recovery programme for total hip replacement and total knee replacement. 2017

Poster No: 40

The addition of adductor canal block improves analgesia, functional outcome and decreases hospital length of stay after TKR

Lubica Merjava Skripecka, Nidhi Gupta, Shan Rajkumar, Christopher Goodland, Michael Warnock, Peter Merjavy

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Abstract

Total knee arthroplasty is associated with significant post-operative pain which can lead to delayed mobilisation, increased post-operative complications and reduced patient satisfaction.

The addition of an Adductor Canal Block (ACB) has been shown to provide analgesia in combination with the multimodal analgesia regimen.

Utilising a Quality Improvement (QI) model the ACB was introduced for patients undergoing TKR in Craigavon Area Hospital with the aim of improving post-operative pain management and facilitating early mobilisation.

This QI project demonstrates that the introduction of an ACB in Total Knee Arthroplasty result in better postoperative analgesia, reduced use of opioids, earlier mobilisation with increased range of motion and shorter inpatient stays.

Data was collected on 10 patients during PDSA cycle 1, 18 patients during cycle 2 and 20 patients during cycle 3. Pain scores are 0-no pain, 1-mild, 2-moderate and 3- severe pain.

PDSA	Resting Pain			Movement Pain			ROM		Ambulation
	D0	D1	D2	D0	D1	D2	D1	D2	D0
Baseline	1	1	1	1.5	2	1	67	74	66.6%
1	0	1.5	1	0	2	2	76	78	80%
2	0	0	0.5	0	1	1	72	75	61%
3	0	0	1	0	1	1	74	79	100%

Median oxycodone consumption fell from 90mg in cycle 1 to 25mg in cycle 3.

Across the project median length of stay improved from 112 hours at baseline by 22 hours to 99, 89 and finally 80 hours from PDSA cycles 1 to 3.

References

1. Aasvang E, Luna I, Kehlet H. Challenges in postdischarge function and recovery: the case of fast-track hip and knee arthroplasty. British Journal of Anaesthesia. 2015;115(6):861-866.
2. Ellis T, Hammoud H, Dela Merced P, Nooli N, Ghoddoussi F, Kong J et al. Multimodal Clinical Pathway With Adductor Canal Block Decreases Hospital Length of Stay, Improves Pain Control, and Reduces Opioid Consumption in Total Knee Arthroplasty Patients: A Retrospective Review. The Journal of Arthroplasty. 2018;33(8):2440-2448.
3. Wang D, Yang Y, Li Q, Tang S, Zeng W, Xu J et al. Adductor canal block versus femoral nerve block for total knee arthroplasty: a meta-analysis of randomized controlled trials. Scientific Reports. 2017;7(1).

Poster No: 41

Standardising follow up of patients presenting with headaches post-neuroaxial block insertion

Kaushliya Katechia, Elaine Hart

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Abstract

Introduction Neuroaxial blockade is a favoured regional anaesthetic technique in orthopaedics and obstetrics that carries a risk of rare but significant complications.[1] The 2014 MBRRACE-UK reported 2 fatal cases of patients with post-neuroaxial block headaches that were inadequately followed up and misdiagnosed.[2] These complications are more common, but not exclusive to the obstetric population. Locally, patient follow-up and documentation was heterogenous post-procedural headache form containing standardised follow up questions and instructions to address this was devised and then audited.

Methods A retrospective audit of completed forms in a 12 month period was conducted. Our standards were that all patients with a suspected/confirmed PDPH should receive written information and anyone having an epidural blood patch (EBP) should be given a 6 week clinic appointment and written notification sent to the GP.

Results 33 forms were completed. 23/33 patients had a suspected/diagnosed PDPH on discharge, and 94% of these patients were given a leaflet. 100% (n=9) patients receiving an EBP were given 6-week follow-up appointments, but only 77% had written notification sent to the GP.

Conclusion Overall compliance with standards was good, except for communication with GP's. Introduction of this form formalised follow up of patients presenting with headaches post-neuroaxial blockade. This audit however, highlighted areas of improvement. We have now revised the form to include GP notification of all dural punctures, and all patients with an EBP to be given an EBP information leaflet, thus improving communication. In addition this form is used in non-obstetric patients, improving patient safety.

References

1. Nepomuceno R, Herd A. Bilateral subdural hematoma after inadvertent dural puncture during epidural analgesia. The Journal of emergency medicine. 2013 Feb 1;44(2):e227-30.
2. Knight M, Kenyon S, Brocklehurst P, Neilson J, Shakespeare J, Kurinczuk JJ (Eds.) on behalf of MBRRACEUK. Saving Lives, Improving Mothers' Care - Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into

Maternal Deaths and Morbidity 2009–12. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2014.

Poster No: 42

Pain relief after shoulder surgery- what happens when the block wears off?

Conor McIvor, Joellene Mitchell, Judith Ramsey

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Abstract

Introduction

Brachial plexus blockade is an effective form of analgesia for shoulder surgery. Once the nerve block subsides pain management becomes a major challenge for anaesthetists[1]. A standard for best practice suggests that 100% of patients should be satisfied with their pain management plan[2].

Methods

Patients consented prior to surgery for a follow up telephone call 2-4 days post-operatively. It was agreed that formal ethics approval was not required and all data was anonymised. Detailed pain scores and analgesia requirements were explored on the follow up.

Results

30 patients identified, 8 lost to follow-up. The average block duration was 25.84 hours. 27% of patients reported severe pain at rest with 45% experiencing severe pain during movement. 36% of patients felt they did not have sufficient analgesia once discharged home. 8 out of 22 felt they needed stronger pain relief. All but 1 patient stated that they would have a repeat nerve block.

Discussions

Once the nerve block wore off it was clear that a large number of patients had inadequate analgesia. Despite the introduction of oxycodone to supplement analgesia, and a patient information leaflet to give advice on pain relief, patients often did not take analgesia as prescribed.

Conclusions

Single injection brachial plexus blocks are limited to a time span shorter than the duration of moderate to severe post-operative pain. The gold standard technique is continuous interscalene blocks (CISB) albeit technically challenging. Future work should concentrate on overcoming the barriers to CISB and aim to increase its uptake[3].

References

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