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Beta-blockers in the Preoperative Management of Patients with Ischaemic Heart Disease

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INTRODUCTION

Ischaemic heart disease (IHD) is a major determinant of perioperative morbidity and mortality. Studies report operative-related reinfarction or cardiac death risks of 30% for patients within 3 months, and 5% within 6 months post-myocardial infarction.[1] Preoperative beta-blocker use in IHD has been shown to reduce cardiovascular mortality and myocardial ischaemia after surgery. The European Society of Cardiology recommends that beta-blockers should be continued up to and including the morning of surgery.[2] We investigated whether these guidelines were being followed at our hospital.

METHODS

We performed a prospective audit among patients with IHD who underwent surgery between August 2012 and May 2013. Basing our standards in accordance with the European Society of Cardiology, we expected 100% of patients with IHD to have received their preoperative beta-blocker. Through analysis of our results, we educated junior doctors and nursing staff within surgical specialities and designed a new preoperative 'nil-by-mouth' poster. After 4 months, we reaudited practice to explore if our interventions had improved preoperative beta-blocker administration.

RESULTS

We audited a total of 131 patients with IHD. Of the 67 patients in the pre-intervention cohort, 12 (18%) patients were excluded as they were not on a regular beta-blocker. In the remaining 55 patients, we found that only 23 (42%) had received their preoperative beta-blockers. Misinterpretation of the nil-by-mouth status contributed towards 26 (81%) patients failing to receive their dose. Haemodynamic compromise contraindicating use and lack in prescription accounted toward the remaining six cases [two (6%) and four (13%) patients respectively] who missed their preoperative dose. We presented these findings to all doctors and nurses and distributed a new 'nil-by-mouth' poster across all surgical wards. After 4 months, we re-audited practice in 64 patients. Nine (14%) patients were excluded as they were not on a regular beta-blocker. A total of 46 (84%) of the remaining 55 patients received their preoperative beta-blocker. Lack in prescription (three cases) and nil-by-mouth status (six cases) accounted towards the nine (16%) cases that missed their preoperative dose.

DISCUSSION

The cardiovascular system in patients undergoing general anaesthesia is subject to multiple stresses. Our pre-intervention data revealed that our hospital failed to meet the necessary standards on preoperative beta-blocker use in IHD, with misunderstanding of the nil-by-mouth status accountable for 26 (81%) patients missing their dose. Through educating staff on what nil-by-mouth applies toward and reinforcing this through a poster, we significantly improved preoperative beta-blocker use in patients with IHD. We hope that in doing so, the rate of perioperative complications in these patients will in turn be reduced.

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Dural Puncture and Hearing Loss

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INTRODUCTION

Hearing loss may complicate spinal anaesthesia with a reported incidence ranging between 0.4 and 40%. Hearing loss relates to the degree of cerebro spinal fluid (CSF) leak and varies with size and type of needle used.[1] The association of hearing loss and post dural puncture headache is less well-described. The aim of this study is to investigate the incidence of hearing loss and the improvement after epidural blood patch.

METHODS

A total of 110 who had symptoms of severe post dural puncture headache following accidental dural puncture with a 16G Touhy needle were recruited for a prospective observational study. Patients were excluded who could not cooperate with audiometric testing. Patient characteristics and symptoms were recorded. Each patient was evaluated by an audiologist and tested on the same audiometric equipment. Audiometry was performed in the sitting position 1 hour before and 24 hours after epidural blood patch. Results were analysed by Students' t-test, and the hearing threshold was considered to have changed if the difference between the two tests was at least 10 dB in the same direction at two or more frequencies.

RESULTS

And 34 patients spontaneously complained of hearing loss. On direct questioning, 91 of the 110 patients felt that their hearing was impaired post dural puncture. Statistical analysis of the audiometric data showed a significant improvement in audiometry post epidural blood patch ($p < 0.0001$) in the low frequency range (<1000 Hz). Also 86 of the 110 patients had an improvement of ≥10 dB at two points in the low frequency range post epidural blood patch. All patients who had complained of hearing loss felt it had returned to normal levels post epidural blood patch.

DISCUSSION

The mechanism of hearing loss associated with dural puncture is thought to be transmission of reduced (CSF) pressure to the inner ear by the cochlear aqueduct, an anatomical connection between the subarachnoid space and inner ear present in most individuals. Alteration in inner ear pressures distorts the basilar and vestibular membranes and auditory hair cell function.[2]

This study would suggest that hearing loss after accidental dural puncture may be more common than appreciated, and that audiometric testing may have a future roll in diagnosis and management of this problem.

ACKNOWLEDGEMENT

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Availability of Emergency Guidelines in the Anaesthetic Room

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INTRODUCTION

The Association of Anaesthetists of Great Britain and Ireland (AAGBI) provides a large number of clinical guidelines that are easily accessible to promote safe anaesthetic practice.[1] At present, there is no consensus on which of these guidelines should be made readily available in anaesthetic rooms. With new trainees entering the speciality on an annual basis, we feel that it is important to provide them with immediate access to specific literature. We investigated which guidelines are currently available in anaesthetic rooms at our hospital. We, then, assessed the knowledge on specific anaesthetic emergencies among trainees, to help ascertain which guidelines should be introduced.

METHODS

We performed a prospective audit among anaesthetists of all training grades between December 2012 and May 2013 at our hospital. We provided each anaesthetist with a questionnaire proforma on how to manage anaesthetic emergencies including anaphylaxis, local anaesthetic toxicity, malignant hyperthermia and massive haemorrhage protocol. We analysed the results and introduced emergency guidelines in each anaesthetic room. After a period of 4 months, we completed the audit cycle by re-assessing knowledge among the anaesthetists to explore if our intervention had improved awareness of these protocols within our department.

RESULTS

We audited a total of 87 anaesthetists, which included 42 pre- and 45 post-introduction of the emergency guidelines. We analysed the results based upon the correct response provided in the management of anaesthetic emergencies. In the pre-intervention cohort, 25 (59%), 16 (39%), 17 (38%) and 9 (23%) trainees provided the correct responses in the management of anaphylaxis, local anaesthetic toxicity, malignant hyperthermia and massive haemorrhage respectively. Based upon these results, we designed and introduced a folder to each anaesthetic room, which contained laminated guidelines for the management of each of these emergencies. After a period of 4 months, we assessed the knowledge post-intervention and found 37 (82%), 33 (75%), 38 (84%),

and 34 (76%) provided correct responses in the treatment of anaphylaxis, local anaesthetic toxicity, malignant hyperthermia and massive haemorrhage respectively.

DISCUSSION

Unanticipated anaesthetic complications and emergencies can be exceptionally stressful events. Accurate knowledge on how to manage these scenarios is vital. However, as this small study demonstrated, without encountering such scenarios on a regular basis, anaesthetists might have poor recall of specific management steps that should be initiated in emergency situations. This audit highlights the importance of providing each anaesthetist with clear and concise guidelines that can be immediately reviewed and applied accordingly in emergency situations. We have shown that by raising awareness and education through designing an emergency guidelines folder, we can promote confidence and knowledge among anaesthetists and therefore enhance patient safety and quality of care.

REFERENCE

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National Institute for Clinical Excellence and Warm—Inadvertent Perioperative Hypothermia

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INTRODUCTION

Inadvertent perioperative hypothermia (IPH) is a common but preventable complication. The reported prevalence of perioperative hypothermia ranges from 50 to 90%.[1] Current evidence demonstrates the adverse effects associated with IPH, which include increased morbidity, prolonged recovery and hospital stay, increased blood loss requiring transfusion, impaired immunity and life-threatening cardiovascular events. By reducing the incidence of IPH through appropriate perioperative temperature control, such complications can be reduced. National Institute for Clinical Excellence (NICE) has issued guidelines on prevention strategies and the management of IPH.[2] We investigated whether these guidelines were being followed at our hospital.

METHODS

We performed a prospective audit among 200 patients who underwent surgery between August 2013 and May 2014. Our standards were to expect 100% compliance with the NICE guidelines on IPH. Through analysis of our results, we educated anaesthetists and nursing staff within surgical specialities and designed a new 'Stop the drop' poster to promote IPH prevention. After 4 months, we reaudited practice to explore if these interventions had reduced the incidence of IPH.

RESULTS

Of the 100 patients in the preintervention cohort, none (0%) received information on IPH, 86 (86%) had a temperature recorded preoperatively, 80 (80%) had a temperature >36ºC prior to anaesthesia, 29 (29%) had correct intraoperative temperature measurement, 35 (35%) had appropriate intravenous infusion warming and 96 (96%) patients were discharged from recovery with temperature >36ºC. We presented these findings to anaesthetists and nurses, and distributed the 'Stop the drop' poster, and after 4 months we reaudited practice. Of the 100 patients in the postintervention cohort, 60 (60%) `received information on IPH, 92 (92%) had a temperature recorded preoperatively, 90 (90%) had a temperature >36ºC prior to anaesthesia, 72 (72%) had correct intraoperative temperature measurement, 84 (84%) had appropriate intravenous infusion warming, and 100 (100%) patients were discharged from recovery with temperature >36ºC.

DISCUSSION

Inadvertent perioperative hypothermia is associated with undesired physiological effects, which can increase morbidity, and complicate anaesthesia and postoperative recovery. Regular measurement and recording of temperature is key to prompt identification and its management. Our preintervention data revealed that our hospital failed to meet the necessary standards on IPH prevention, specifically in the pre- and intraoperative phases. By targeting these areas of practice through staff education and promoting current NICE guidelines through design of a poster, we significantly improved clinical practice. We hope that in doing so, the incidence of complications related to IPH will be reduced.

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National Institute for Clinical Excellence and Comfortable: Fascia-iliaca Blocks in Fractured Neck of Femurs

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INTRODUCTION

Approximately, 75,000 fractured neck of femurs (NOFs) occur each year. Patients are in severe pain upon arrival to hospital. National Institute for Clinical Excellence (NICE) hip fracture guidelines recommend analgesia with paracetamol and opioids, with addition of a fascia-iliaca block (FIB) if pain persists.[1] We investigated whether these guidelines were being followed at Barnet General Hospital, London.

METHODS

We performed a prospective audit between March and July 2014, divided into two parts. We questioned orthopaedic and A and E trainees on their knowledge of NICE hip fracture guidelines and how to perform FIBs. We, then, audited 105 patients with fractured NOFs over 5 months. We expected 100% of patients to have received analgesia with paracetamol, systemic opioids and FIB if clinically indicated. We analysed the results and introduced interventions, which included educating staff on how to perform FIBs and design of a 'Pain management in fractured NOFs' poster. After a period of 6 weeks, we completed the audit cycle by re-assessing knowledge among the trainees to explore whether our interventions had improved awareness of NICE guidelines and use of FIBs within our hospital.

RESULTS

We audited 40 trainees in orthopaedics and A and E. Following questioning, 18 (45%) trainees were aware of NICE guidelines on analgesia in hip fractures and 9 (23%) trainees felt competent to perform a FIB without direct supervision.

We audited a total of 105 patients with fractured NOFs, which included 63 in the pre- and 42 in the postintervention cohort. In the preintervention cohort, 63 (100%) patients received preoperative paracetamol and morphine. Four (6%) patients received FIB, despite 51 (81%) patients remaining in pain preoperatively.

Following our interventions, we reaudited practice in 42 patients and found 28 (67%) of patients received FIB, with an overall reduction in preoperative pain scores.

DISCUSSION

This audit revealed that our hospital failed to address preoperative pain in fractured NOFs. Many trainees felt inexperienced to perform FIB confidently. By raising awareness of NICE guidelines on hip fractures, improving assessment of pain and organising a practical workshop, we promoted use of FIBs with confidence and significantly reduced preoperative pain.

Promoting NICE guidelines and educating trainees to perform a simple, yet effective procedure can provide significant pain relief and reduce opioid-related side effects in fractured NOF patients.

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Do Emergency Admissions lead to Cancellation of Elective Neurosurgical Cases?

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INTRODUCTION

Cancellation of elective surgery prolongs waiting time, inefficient use of theatre time and wastage of valuable resources.[1] It also causes severe inconvenience to patient and their family members. Incidence of cancellation of elective cases varies from 6 to 17% globally. According to department of health, up to 16,000 elective cases are cancelled each year representing 1% of total elective surgeries performed in UK.[2] In our hospital, we looked into the factors leading to cancellations of elective neurosurgical cases.

METHODS

Over a period of 1 month, we collected the data of neurosurgical intensive therapy unit (ITU) admissions. We analysed the reasons for admission to ITU. We also collected surgical data from neurosurgical theatre computer system.

RESULTS

A total of 61 patients were admitted to neurosurgical ITU during this period. And 46 were neurosurgical cases. And 25 of these patients were elective admissions, whereas 21 were emergency admissions. Remaining 15 were medical cases and all of them were emergency admissions. In 1 month, 229 neurosurgical procedures were performed and 32 elective neurosurgical cases were cancelled due to the factors listed below. A total of 15% cancellations were due to lack of ITU beds; 17% of cancellations were due to lack of ward beds; 25% of cancellations were due to patient's being unfit for surgery or anaesthetic and 40% of our cases were cancelled due to administrative factors.

Neurosurgical intensive therapy units admissions

Surgical procedure	*No. of cases*
Aneurysm coiling	7
Aneurysm clipping	2
Craniotomy/craniectomy	14
Craniotomy (tumour excision)	17
Burr hole	1
Trigeminal nerve decompression	2
Spine surgery	3
Total	46

Causes of cancellations

List overbooked	1 (3%)
Equipment unavailable	1 (3%)
Interrupted by emergency	2 (6%)
Patient refused operation	2 (6%)
Patient unfit for anaesthetic	2 (6%)
Patient unfit for surgery	6 (18%)
Surgery no longer required	3 (9%)
Patient did not attend	4 (12%)
Ward beds unavailable	6 (18%)
ITU beds unavailable	5 (15%)
Total	32

ITU: Intensive therapy units

DISCUSSION

Causes for cancellations are multifactorial. They can be categorised into patient factors, clinical factors and management or administrative factors. Nonattendance and refusing to have surgery at the last minute are patient factors. Unfit for surgery, anaesthesia and patient not requiring surgery are examples of clinical factors. Unavailability of ward/ITU beds, overbooking of list and lack of equipment come under administrative category. In our hospital, all these factors seem to play an equally important role. Change of one factor (increasing beds) is less likely to make a significant improvement without tackling other major factors.

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Spinal Anaesthesia facilitates Early Recognition of Transurethral Resection of Prostate Syndrome

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INTRODUCTION

Transurethral resection (TUR) syndrome is a rare but potentially dangerous complication of transurethral resection prostate/bladder tumour (TURP/BT).[1] Early recognition of the tell tale signs and symptoms is important. This can be facilitated by the use of spinal anaesthesia.[2]

METHODS

A total of 48 patients were identified from prospectively maintained records over a 15 years period and the case records reviewed retrospectively. All TURs are routinely performed under spinal anaesthesia and follow a standardised setup.

RESULTS

A total of 48 patients displayed symptoms and signs of TUR syndrome. Trainees of varying experience caused all but one case. Median resection time, resection weight and volume of intraoperative glycine irrigation fluid were 55 minutes (40–75), 44 gm (24–65), 28 litres (24–48) respectively. Only 16/48 TURPs had a recorded capsular perforation. Preoperative *vs* postoperative median haematocrit, haemoglobin and serum sodium were 0.42 *vs* 0.33, 14.2 g/dl *vs* 10.1 g/dl and 142 mmol/l *vs* 121 mmol/l respectively. Patients presented with nausea 44/48, vomiting 28/48, visual disturbance 29/48, apprehension 37/48, disorientation 17/48, breathing difficulties 17/48, bradycardia 19/21. The earliest observed sign was nausea 21/48, bradycardia 11/48, visual disturbance 10/48 and apprehension 11/48 after which the procedure was abandoned. None of the patients developed stupor, coma or seizures. Nine out of forty-eight patients were treated in high dependency unit and all were treated with frusemide. One patient required a blood transfusion. All patients recovered within 48 hours (18–48) and none had any long-term complications on follow-up.

CONCLUSION

Trainees almost exclusively cause TUR syndrome. Spinal anaesthesia enables early recognition of signs and symptoms of the complication.

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Perioperative Prescription of Drugs by Anaesthetists at Birmingham Children's Hospital, UK

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BACKGROUND

There was an increase in the number of critical incidents due to overdosing of drugs in children. It may be due to ambiguity in the prescriptions not written in the drug chart while after administration it was written in the anaesthetic chart. This resulted in confusion in administration of drugs by ward staff. Medication charts are: (a) means of communication and (b) they play a critical role in the medicines management pathway.[1] This audit was designed to look into our practice of prescribing drugs on the drug chart.

OBJECTIVES

1. Improve recording prescribing and administration of antibiotics, antiemetics and analgesics like paracetamol and non-steroidals given commonly by anaesthetists in the drug chart
2. To prevent inadvertent overdosage of these drugs
3. Champion safe and effective prescribing.

METHODS

A simple questionnaire with four questions to be filled in by recovery staff. Each patient's anaesthetic chart and drug charts were reviewed. This audit took place for 3 weeks in June 2014.

RESULTS

We had looked at 121 patient charts and found 67% of nonsteroidals, 70% of antiemetics, 73% of antibiotics and 85% of paracetamol administration was documented in the drug charts.

DISCUSSION

Prescribing error has been the most commonest in-hospital medical error.[2]

The resulting morbidity may be severe in the small children as the therapeutic window is decreased. This may result in increased plasma levels of paracetamol, antibiotics which can have toxic side effects on hepatic and renal functions.

The gap in communication between the anaesthetist and the ward staff was widening and getting poor. We need to improve our standards and adhere to clear and correct documentation.

RECOMMENDATION

We need to set high level of standards of care and it needs to be provided in a safe environment. Correct prescriptions in the drug charts would minimise the potential for patient harm.

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Use of Ultrasound in Anatomical Variations

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CASE

We present few cases of anatomical variations identified during performance of regional anaesthesia. Anatomical variations can pose a hindrance to perform nerve blocks and predispose to complications.

WE NOTICED

1. Transverse cervical artery and dorsal scapular artery arising directly from subclavian artery and in the path of the needle needed to perform the block.
2. Transverse cervical, dorsal scapular and vertebral artery close to nerve roots at interscalene level.
3. A persistent median artery within the epineurium of median nerve.
4. High level origin of profunda femoris artery and lateral circumflex femoral artery and femoral nerve in close relationship to them.

DISCUSSION

Ultrasound (US) is fast becoming the gold standard technique for regional anaesthesia. The main advantage of US-guided nerve block is that it allows real-time visualisation, helps in defining the anatomy of the nerves and surrounding structures. National Institute for Health and Care Excellence (NICE) recommends US-guided nerve block as it is considered a safe and efficacious technique.[1]

Anatomical variation	*Incidence*	*Significance*
Transverse cervical and dorsal scapular artery seen at supraclavicular level	1.9-21.2% and 2.8-21.7%	Block failure, LA toxicity, Bleeding
Transverse cervical and dorsal scapular artery seen at interscalene block level	47.5-66.9% and 4.8-17%	Intravascular injection, Block failure
Persistent median artery	1.5-27.1%	Bleeding, Block failure, Intravascular injections
High origin of profunda femoris and lateral circumflex femoral originating from femoral artery	1.2-12% and 8-43.3%	Block failure, Bleeding, LA toxicity

Anatomical variations contribute to block failure and occurrence of complications. Good knowledge of anatomy is essential to use US optimally and perform regional nerve blocks. Ultrasound is the only method that enables detection of anatomical variations while performing regional anaesthesia. Ultrasound can decrease potential complications by recognition of abnormal anatomy and improve success rate by adopting alternative techniques and approaches.

CONCLUSION

There is significant incidence of anatomical variation and hence US is essential to evaluate the anatomy and to perform the block successfully avoiding complications.

REFERENCE

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Documentation and Consent for Peripheral Nerve Blockade

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BACKGROUND AND AIMS

The GMC has issued clear guidance in 'Good Medical Practice' that patients should give informed consent for medical interventions and information given to patients should be clearly documented.[1] Anaesthetists must obtain informed consent for regional anaesthesia and document procedures fully.[2] The study aimed to examine documentation the information given to patients regarding peripheral nerve blockade as well as of the procedure itself.

METHODS

An audit performed over 2 months in a district general hospital where regional anaesthesia is performed on a regular basis. Anaesthetic charts of patients were checked for recording of informed consent. The documentation of the procedure performed was also assessed (adjuncts used, type of local anaesthetic and amount used).

RESULTS

A total of 30 were assessed of varying types of block; interscalene (17), femoral (3), cervical (3), forearm (3), popliteal (1), supraclavicular (1), axillary (1) and TAP (1). Of these, 27 cases were performed by consultants and three by nonconsultant grade anaesthetists. Documentation of information given to patients varied depending on complication (infection 33%; nerve damage 73%; block failure 73%). Documentation of the procedure involved was generally more comprehensive with 100% of cases documenting the method of block and 96% of cases documenting the local anaesthetic used and volume given.

CONCLUSIONS

Documentation of the consent process for regional procedures varies largely at the institution examined. Patient information leaflets or preprinted proformas or charts may inform disclosure, enhance the consent process and facilitate documentation.

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Audit on Fasting Times for Fluids in Elective Lower Segment Caesarean Section—Impact of Awareness of Guidelines on the Duration of Fasting

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INTRODUCTION

Appropriate preoperative fasting reduces the incidence of pulmonary aspiration. However, prolonged fasting has a number of detrimental effects.[1] The catabolic response to prolonged fasting leads to increased stress response to surgery. Dehydration exaggerates the hypotensive response to anaesthesia. Prolonged fasting is distressing to patients and leads to headache, hunger, thirst, nausea and increased anxiety levels.[2] This is especially true in obstetric population. Prolonged starvation is known to prolong recovery, delay wound healing and hospital stay.[1] Elective lower segment caesarean section (LSCS) is commonly delayed by emergency cases from the delivery suite leading to prolonged starvation times. Guidelines on intravenous fluid therapy for adult surgical patient (GIFTASUP), Association of Anaesthetists of Great Britain and Ireland (AAGBI) and European Society of anaesthesiology published preoperative fasting guidelines in last few years.[3,4] Information about fasting guidelines was given to midwives (obstetric newsletter) and patients (information leaflets and direct communication from anaesthetist during preoperative visit) in our hospital.

METHODS

Audit was registered with our hospital audit department.

The aim of this audit was to establish if our local practice was compliant with national and international guidelines on the preoperative fasting for women undergoing elective LSCS and also to find out if the message was dissipated to the target groups. Audit was conducted over a period of 6 weeks. The following data were collected:

- Last time patient had fluids (water) to drink
- Are patients aware of fasting guidelines?

- Are midwives aware of fasting guidelines?
- Was patient feeling thirsty on arrival to theatre?

RESULTS

Data collected from 44 patients. Minimum starvation time: 120 minutes, maximum starvation time: 665 minutes and mean duration for starvation: 259 minutes. Mean duration for 1st case: 212 minutes, mean duration for 2nd case: 246 minutes, mean duration for 3rd case: 395 minutes.

Only 9% of patients are fasted for fluids around 2 hours, 29.5% patients are fasted for fluids <3 hours, 9% of midwives are not aware of guidelines, 50% of patients are not aware of guidelines. Mean duration of fasting for fluids 192 minutes (aware) *vs* 325 minutes (unaware), patients who are unaware of guidelines had much longer fasting times. A total of 61% of patients were thirsty when arrived into theatre. Patients fasted for more than 180 minutes complained of being thirsty.

DISCUSSION

We have identified that significant improvements can be made in our practice. We are in the process of rephrasing patient information leaflets, as there seems to be a significant difference between what we tell them and what they perceive.

Once the surgeon has decided on the order of the list with the anaesthetist, the approximate time the patient will be going to theatre can be identified and therefore 2 hours prior to this time clear fluid can be given. Midwives should check this with the anaesthetist doing the elective list. We plan to reaudit next year.

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Qualitative Evaluation of Ultrasound-guided Single Dose Interscalene Brachial Plexus Block for Shoulder Procedures

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INTRODUCTION

Interscalene brachial plexus block provides anaesthesia and/or analgesia for operations on the shoulder and proximal arm. Ultrasound (US)-guided interscalene block targets the roots and proximal trunks of the brachial plexus where they are sandwiched between the anterior and the middle scalene muscles (Fig. 1). Despite the current insufficient evidence of US-guided blocks improving success rate or decreasing complication rate, it is extensively used in clinical practice. The aim of this prospective audit was to evaluate postoperative pain relief, duration of block, incidence of nausea/vomiting, complications, time spent in recovery and day surgery unit after single dose interscalene block and general anaesthesia.

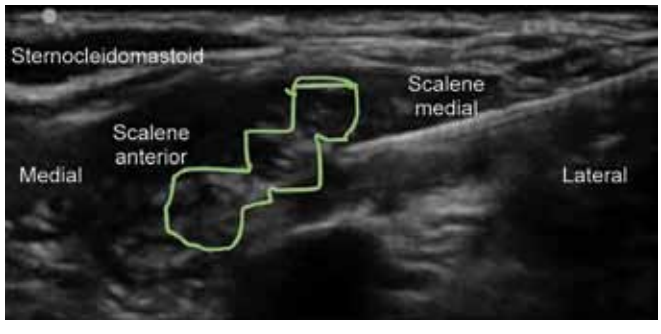


Fig. 1: Sonoanatomy of interscalene brachial plexsus block using sonoplex needle

METHODS

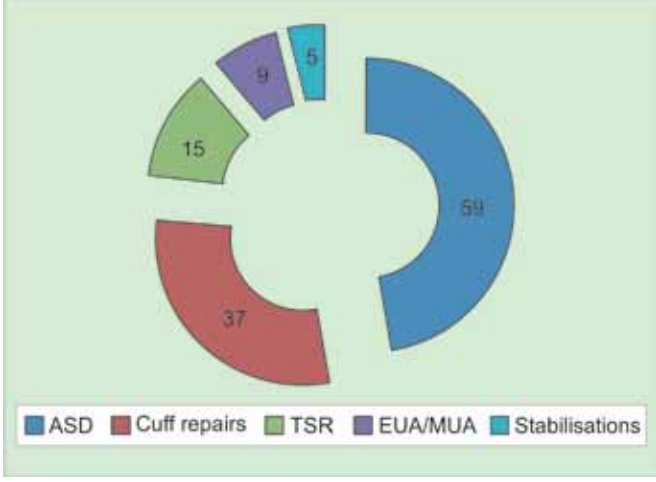
After registering with the trust's audit department, this prospective audit evaluated 125 consecutive patients, who had shoulder procedure performed under US-guided single dose interscalene block and general anaesthesia. Various shoulder procedures performed were 59 arthroscopic shoulder decompressions, 37 arthroscopic cuff repairs, 15 total shoulder replacements, nine examination under anaesthetic-manipulation under anaesthesia (EUA/MUA) and five stabilisations (Graph 1). Under Midazolam sedation, all patients had US-guided interscalene block performed using 5 ml of 2% lignocaine and 5 ml of 0.5% levobupivacaine. All blocks were performed by two authors. General anaesthesia was standardised using propofol, fentanyl, ondansetron, dexamethasone, parecoxib, O_2, N_2O and desflurane. Postoperative incidence of nausea and vomiting, pain score using a scale of 0 to 4 and time spent both in recovery and day surgery was assessed.

RESULTS

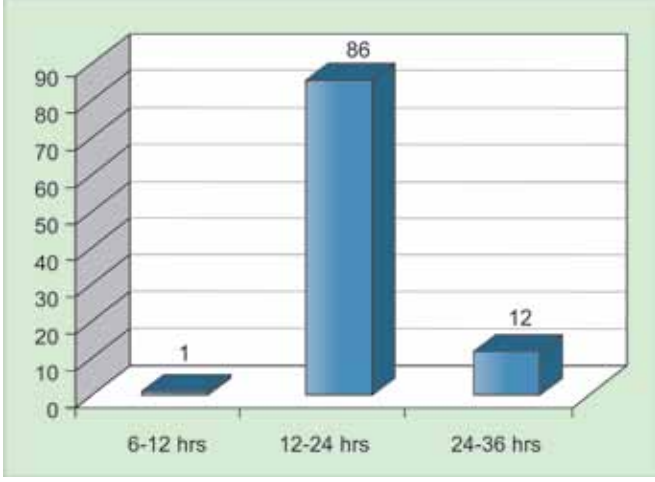
There were 64 males and 61 females patients with a mean age of 56 years (17-91). The mean operating time was 75 minutes (15-200 min). In recovery pain, score was 0 in 122 patients (97.6%), pain score of 3 in two patients (1.6%) and pain score of 4 in one patient (0.8%). In one patient (Bankart repair) interscalene block was repeated in recovery room and two patients needed intravenous tramadol as rescue analgesic. Only one patient (0.8%) had mild nausea and none of the patients needed any antiemetics in recovery or day surgery. Mean time spent in recovery was 49 minutes (30-120 min). In this audit, mean time for ready to discharge from day surgery was 135 minutes (90-300 min). Duration of block on average was 19.72 hours (6-34 min) (Graph 2). There were no complications due to interscalene block.

CONCLUSION

This prospective qualitative audit shows that US-guided single dose interscalene block is very effective in relieving pain in any shoulder procedure, with a high success rate and no complications. Adequate pain control is essential for early physiotherapy and rehabilitation which is necessary for improving the outcome after shoulder surgery. There was very low incidence of postoperative nausea and vomiting with our technique, which was achieved by completely avoiding the use of morphine. Time spent by the patients in recovery and day surgery was very minimal, improving the patient experience.



Graph 1: Shoulder procedures



Graph 2: Duration of the block

Perioperative Management of Low-dose Aspirin to Study 'Change in Behaviour' of Consultants

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BACKGROUND

Changing established behaviour is difficult. Change can take long time (clinical guideline can take up to 3 years to be fully implemented). We wanted to study individual barriers that may prevent or impede progress as per NICE suggested practical guide tool. We assessed clinical practice on perioperative management of aspirin by consultants. Current available evidence

suggests aspirin use should be invidualised after risk stratification of patient according to their risk of developing a thrombotic event and risk of surgical bleeding.

METHODS

Types of barriers in healthcare include both at organisational level and individual level. Individual barriers include awareness and knowledge, motivation, acceptance and beliefs, skills, practicalities and barriers beyond our control—external environment (finance and political). A survey was conducted of consultant, surgeons and anaesthetists opinion on continuing low-dose aspirin for their 10 most commonly performed elective procedures to identify individual barriers.

RESULTS

Most surgeons who replied survey will accept continuing low-dose aspirin except for high-risk major cases where there is potential for bleeding. Anaesthetists who responded will continue except for spinal/epidural/eye block, which is consistent with current recommendations. A total of 60% surgeons and 99% of anaesthetist replied. Some of the comments include [(One of 'my case' was difficult to stop bleeding, I don't know what my royal college says, No evidence—specific to my type of surgery/ procedure, I don't mind—if others do same, Will do (as told!)].

DISCUSSION

To develop a successful strategy for change, you need to understand the types of barrier faced in healthcare than it is possible to develop a tailored approach to overcome them and encourage changes in behavior and ultimately implementation of guidance. Awareness and knowledge of what needs to change are vital first steps. Evidence shows healthcare professionals are often unaware of latest evidence-based guidance though our survey showed otherwise. They may be aware but don't know how they need to change their practice inline with guidance. Some feel it undermines their autonomy or is not applicable to their population. Motivation is fundamental part of nearly everything we do. External factors can drive change, for example provision of incentives, etc. Internal factors like 'self-motivation', drive and desire to improve are very important. There was varied level of motivation in our subjects. An individual's personal beliefs and attitudes impact significantly how they behave. Some healthcare professionals find it difficult to accept if it is in conflict with other guidance issued by professional bodies. This was clearly reflected in some of the comments in our survey.

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Impact of the Introduction of E-learning Prior to a Basic Transthoracic Echo Course

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INTRODUCTION

Focused Intensive Care Echo (FICE) accreditation is a nationally approved pathway for training and accreditation in basic transthoracic echocardiography (TTE) for Critical Care Physicians in the United Kingdom. Recently, an e-learning module, the

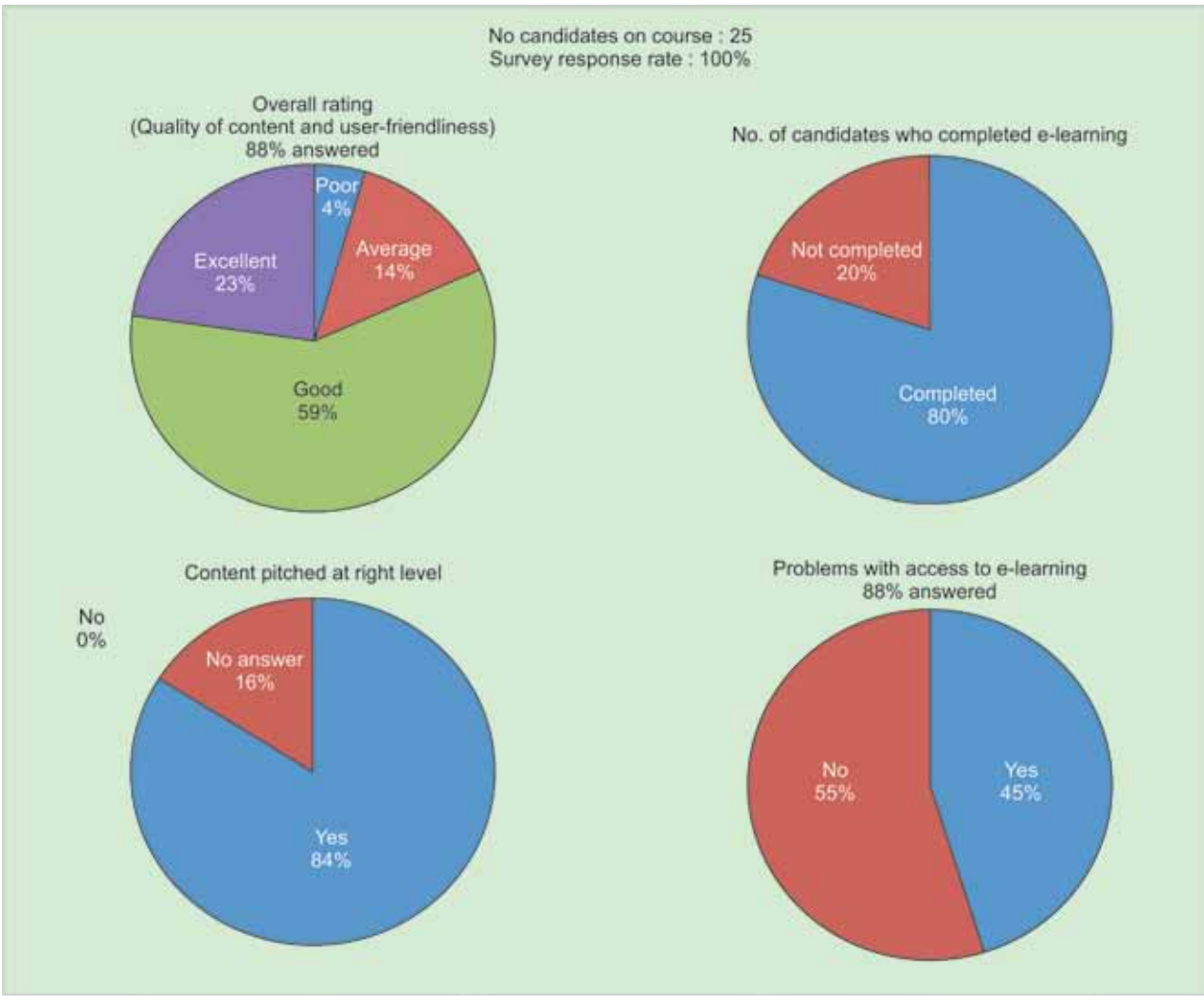
intensive care echo and basic lung ultrasound (ICE-BLU) has been introduced to facilitate TTE learning[1]. Completion of this module is recommended by the FICE committee of the Intensive Care Society (ICS) as part of FICE accreditation.[2]

METHODS

The UCLH FICE course is a simulation-based basic transthoracic echo course approved by the ICS for FICE accreditation. All candidates who attended the course in August 2014 were required to complete the ICE-BLU module prior to the course. On the morning of the course, the candidates were asked to complete a paper-based questionnaire to assess the impact of the e-learning module.

RESULTS

The response rate of the survey was 100%. The results are shown in the figure below:



CONCLUSION

Our survey has shown that the e-learning initiative was welcome by the candidates and was rated high by most candidates. However, nearly half of the candidates faced problems accessing the module, online. The results of the survey will be presented to the FICE committee of the ICS to address the issues regarding access to the module.

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