# WINTER NEWSLETTER

## British Society of Orthopaedic Anaesthetists, December 2018


***Dear BSOA Members***

**"Our many different cultures notwithstanding, there's something about the holidays that makes the planet communal. Even nations that do not celebrate Christmas can't help but be caught up in the collective spirit of their neighbour, as twinkling lights dot the landscape and carols fill the air, it's an inspiring time of the year"**

Christmas gives us the opportunity to pause and reflect on the important things around us - a time when we can reflect on the year that has passed. For BSOA we can celebrate two successful meetings in London and Nottingham. Having welcomed Dr Anwar Hussein as our honorary secretary, and Emma Pack and Vanisha Patel as our new Trainee representatives, we look forward to another fantastic year.

We would also like to extend our greatest appreciation and gratitude to Dr Jan Cernovsky (immediate past Honorary Secretary) and Dr John Vernon (past treasurer) for their infectious unrelenting enthusiasm and commitment to BSOA for all these years and welcome them to stay on as a part of BSOA board as our wise counsel.

Trustees being appointed, training underway as we speak, it's the time to look forward to consolidating becoming a charitable trust in 2019.

**We are delighted to announce the following future meeting and hope you can join us:**

2019 - Monday 29th April, Chester

- Wednesday 6th & Thursday 7th November, Birmingham

2020 - Friday 24th April, Oxford

- **November 2020 is going to be our 25th Anniversary and is going to be in Budapest**

We are also pleased to include our prize-winning poster from Prague "Pelvic Fracture Pathway" and the winning posters and abstracts from the 2018 Nottingham meeting.

***Let me take this opportunity to wish everyone a Merry Christmas!***

***Sincerely,***

Bernadette Ratnayake

**Bernadette Ratnayake, President of the BSOA**

# BSOA WINTER NEWSLETTER

***Everywhere, everywhere, Christmas tonight!***
***Christmas in lands of the fir-tree and pine,***
***Christmas in lands of the palm-tree and vine,***
***Christmas where snow peaks stand solemn and white,***
***Christmas where cornfields stand sunny and bright.***
***Everywhere, everywhere, Christmas tonight!***

***Christmas where children are hopeful and gay,***
***Christmas where old men are patient and grey,***
***Christmas where peace, like a dove in his flight,***
***Broods o'er brave men in the thick of the fight;***
***Everywhere, everywhere, Christmas tonight!***
***For the Christ-child who comes is the Master of all;***
***No palace too great, no cottage too small.***

*Phillip Brooks, Man and His master, American preacher 1835-1893*

## *A message from Emma and Vanisha, BSOA Trainee Reps…*

As your trainee reps we are currently collating suggestions and ideas for future projects involving the BSOA community!

To start us off, in the New Year, we are planning to send out a survey to all members to look at spinal opiate use in elective joint arthroplasty. This will aim to assess opiate use and dose as well as post-operative complications.

If you have any further suggestions or ideas for this survey or future projects, please do get in touch.

Wishing you all a Merry Christmas and a Happy New Year!

Vanisha Patel and Emma Pack, BSOA Trainee Reps

vanisha.patel@nhs.net | esp.pack@googlemail.com

B.S.O.A
*British Society of Orthopaedic Anaesthetists*

NHS
The Robert Jones and Agnes Hunt Orthopaedic Hospital
NHS Foundation Trust

# British Society of Orthopaedic Anaesthetists Spring Scientific Meeting

Crowne Plaza Chester, Trinity St, Chester CH1 2BD | Monday 29th April 2019

Join us in Chester for the 2019 Spring Scientific Meeting

## Programme Includes

**Success stories in War Trauma Surgery**
*Prof Deiary Kader, London*

**Intraoperative Neuromonitoring**
*Dr Sumeeta Conry, Oswestry*

**Anaesthesia at the Roadside**
*Dr Matt OMeara, North Midlands*

**PQIP**
*Dr Ramani Moonesinghe, London*

**Preoperative Anaemia and QIST**
*Dr Alwyn Kotze, Leeds*

**Human factors in Anaesthesia**
*Cpt Phil Higton, Surrey*

**Patient Reported Outcome Measures in Anaesthesia**
*Dr James Maybin, Oswestry*

Rates are as follows:
Consultant/SAS Member - £150.00, Consultant/SAS Non-Member - £190.00
Trainee Member - £95.00, Trainee Non-Member - £130.00

CPD Points Available

For more information, please visit:

**bsoa.org.uk/conference/2019-spring-scientific-meeting**

**For more information contact:** Lucy Parkinson **Telephone:** 0114 299 5922
**Email:** lucyparkinson@eventmanagementdirect.co.uk

# Development Of An Anaesthetic Management Pathway For Pelvic And Acetabular Fractures

**Samuel Hird [1], Samson Ma [1], Puneet Ranote [2]**

St George's University Hospitals NHS Foundation Trust, London

1, Specialty Trainees in Anaesthesia, St George's University Hospitals NHS Foundation Trust, London 2. Consultant Anaesthetists, St George's University Hospitals NHS Foundation Trust, London

## Background

St George's University Hospital performs approximately 100 pelvic fracture repairs per year. These are made up of primary, secondary and tertiary referrals from across the whole of the South East of England.

Patients vary across all age ranges from fit young adults to elderly patients with complex comorbidities. Injuries range from isolated pelvic fractures to those with complex polytrauma. The majority of anaesthetics are provided by dedicated trauma anaesthetists however non trauma anaesthetists may occasionally be involved.

NICE (The National Institute for Health and Care Excellence) have recently published guidelines on the management of patients with pelvic fractures[1] encompassing pre hospital and immediate management. It does not address perioperative anaesthetic and multidisciplinary care. The perioperative management of pelvic fractures involve close collaboration of surgical, anaesthetic and multidisciplinary teams. We hope this novel pathway will help us deliver excellent care by guiding the management of pain, medications investigations and preparation of blood products for all members involved in this complex group of patients.

The use of standard operating procedures has been shown to improve outcomes in trauma patients[2].

## Aims

We aimed to standardise our anaesthetic management for this group of patients. By standardising a package of care deemed as best practice we aim to improve:

- Delays in preoptimisation of patients[3]
- Acute and chronic pain with use of regional blocks and referral to acute pain team
- Facilitate surgical testing of perineal sensation by avoiding neuroaxial blockade
- Unnecessary preparation of blood products
- Unnecessary transfusion with use of Tranexamic Acid and cell saver
- Multidisciplinary Team communication regarding positioning and blood loss

We wanted to achieve this by provision of a standard reference tool for the perioperative management that can be used by smaller referring hospitals.

## Methods

We reviewed audit data and peer reviewed literature in order to formulate a multidisciplinary care pathway in association with meetings with surgeons, anaesthetists, pain specialists, physiotherapists and specialist nurses.

Previous work at St Georges regarding pelvic fractures has looked at acute and chronic pain using ketamine analgesia[4] and acute pain and morphine consumption with intraoperative QLB block.

## Results

A copy of our anaesthetic pathway is illustrated here. The Pathway is split into perioperative time frames and contains a checkbox format to ensure each point is addressed.

St George's University Hospitals NHS
NHS Foundation Trust

### Anaesthetic Perioperative Management of Pelvic and Acetabular Fractures

**Pre Operatively**

- Obtain History ☐
- Analgesia - See Analgesic Guideline ☐
- Stress Ulcer Gastro Intestinal Prophylaxis ☐
- Routine bloods with Group and Save ☐
- Cross-match only if : Preoperative Hb < 8 or Predicted Estimated Blood Loss > 1L (2 units) or Ilioinguinal Surgical Approach ☐
- If Hb < 8 transfuse 1 unit ☐

**At Team Brief Discuss**

- Surgical technique (open or percutaneous) ☐
- Estimated Blood Loss ☐
- Patient Positioning ☐
- Need for Tranexamic Acid ☐
- Need for Cell Saver ☐
- Check blood if requested ☐
- Post op destination ☐

**Intra Operatively**

- General Anaesthesia and Regional (Quadratus Lumborum Block) ☐
- Large bore Intravenous access (2 if Estimated Blood Loss > 1L) ☐
- Warm Intravenous Fluids ☐
- Invasive arterial monitoring ☐
- Trauma line or Central Line if Estimated Blood Loss > 1.5L or comorbidities require ☐
- Oral temperature probe ☐
- Cardiac Output Monitoring ☐
- Co-amoxiclav 1.2g IV at induction ☐
- Tranexamic Acid 1g IV ☐
- Ranitidine 50mg IV if no stress ulcer prophylaxis on ward ☐
- Antiemetics ☐
- Analgesic Regime as per protocol ☐
- Urinary Catheter ☐
- Warming Devices as Standard ☐
- Cell saver setup and blood if used ☐

**Post Operatively**

- High Dependency Unit consideration if lengthy surgery, high blood loss or comorbidities ☐
- Arterial Blood Gas in recovery for Hb and metabolic profile ☐
- Routine post op bloods ☐
- Analgesic regime – See Analgesic Guideline ☐
- PRN antiemetics ☐
- Intravenous fluids as appropriate ☐
- Acute pain team review ☐

## Discussion

This is a novel management pathway that we have developed, beyond the general guideline that has been produced by NICE. We hope that standardisation of anaesthetic management for this group of patients will help to improve patient outcomes, post operative acute and chronic pain, blood transfusion, efficiency and patient experience/journey. We hope this reference will help guide non trauma anaesthetists and non specialists in the perioperative management of patients with pelvic fractures.

For future work we will look at compliance with this perioperative management guideline and its impact of the analgesic interventions on chronic pain. We will look at the rates of blood cross match and blood transfusion.

### References

1. National Institute For Health and Care Excellence (July 2018) Pelvic Fractures in Hospital. Available at: https://pathways.nice.org.uk/pathways/trauma/pelvic-fractures-in-hospital.pdf accessed 19 Sep 2018
2. Cuschieri J et al. Benchmarking outcomes in the critically injured trauma patient and the effect of implementing standard operating procedures. Annals of Surgery. 2012; 255(5) 993 – 9.
3. Bircher et al. Delays in Definitive Reconstruction of Complex Pelvic and Acetabular Fractures. The Journal of Bone and Joint Surgery. 2006. 88-B(9) 1137 – 9
4. Hucker T et al. Morphine/Ketmaine PCA prevents seuropathic pain after pelvic trauma surgery. European Journal of Anaesthesiology. 2010; 27(47) 203.

# BSOA WINTER NEWSLETTER

***Poster and Oral Presentations 2018!***

Thank you to all who submitted a poster or oral abstract to the BSOA ASM 2018. Please find below the winning entries:

***First Place Poster:*** **'Joint School' More than just a chat**

*Tomlin R., Raithatha M., Gribble A., Sanapala S. and Jigajinni S.*
*Whipps Cross University Hospital.*

Use of spinal anaesthesia is a cornerstone of many successful enhanced recovery programmes for primary hip and knee arthroplasty in the UK. In our unit however, a combination of high patient anxiety levels regarding spinal anaesthesia and unrealistic expectations regarding postoperative pain were often seen on the morning of surgery. Reported general anaesthesia rates were therefore high (>90%), with low rates of successful early post-operative mobilisation (<5% on day of surgery). In response we re-designed our multidisciplinary pre-operative patient education sessions - 'joint school', incorporating into the programme interactive talks lead by consultant anaesthetists and anaesthetic trainees. Patient attendance at the renewed joint school was also made a mandatory requirement prior to surgery.

**Methods**

Immediately prior to our intervention we surveyed a snapshot of post-operative patients regarding their experience and areas for improvement. Following this all patients awaiting primary hip and knee arthroplasty were asked to attend joint school. The programme comprised of multidisciplinary sessions covering surgery, physiotherapy, targets for mobilisation and discharge, rehabilitation and occupational therapy. Presentations covering anaesthetic choices, rationale behind spinal anaesthesia, and post-operative analgesia were then delivered at the end of the session. A strong emphasis was placed on motivation, the practicalities of being awake during surgery and a positive mind set. For a period of three months, all attendees were surveyed at the end of the session, and further follow up was performed post-operatively.

**Results**

Pre-intervention 17 patients were surveyed, 12 (70%) indicated that a joint school incorporating expert information regarding anaesthesia and pain relief would have improved their operative experience. Post intervention, 54 patients attended the mandatory joint school. The sessions were well received, all 54 patients expressed marked anxiety reduction regarding anaesthesia. Fifty (92%) of patients found the presentation regarding anaesthetic options very useful. and felt better informed afterwards. Forty-four (82%) also felt better informed regarding post-operative pain relief and expectations. Twenty-seven (50%) patients were successfully followed up post operatively. All felt the new joint school and anaesthetic education had improved their experience. Our general anaesthesia rates have since fallen dramatically. All patients now receive spinal anaesthesia unless there is a contraindication or procedural failure. Physiotherapists are now successfully mobilising >90% of cases on the day of surgery, and consistently report improved patient motivation and expectations regarding pain relief. The revised joint school, combined with the anaesthesia and analgesia education session, is now embedded in our new Enhanced Recovery Programme, and has been instrumental in our reduction in 'fit for discharge' time from a previous mean of five days down to three days.

***Second Place Poster:*** **Arthroscopic shoulder surgery – improving patient experience and promoting the use of regional anaesthesia**

*H. Jothiraj, R. Wand, S. Sanapala, S. Chitre and S. Jigajinni*
*Whipps Cross University Hospital, London, UK*

Orthopaedic surgeons in our unit request the use of interscalene brachial plexus blockade (ISB) for arthroscopic shoulder surgery. Reasons cited include: excellent analgesia, reduced opioid side effects [1], early pain free passive mobilisation facilitating active rehabilitation [2] and timely hospital discharge. Despite this, in our unit many patients are still not offered an ISB. Reasons cited by anaesthetists include: no perceived benefit, rebound hyperalgesia on block regression and lack of operator experience. We sought to quantify the benefits by following up a sample of patients in our unit who did receive ISBs for arthroscopic shoulder surgery, and subsequently implement training to improve ISB and regional anaesthesia (RA) skills and utility.

**Methods**

We gathered data over six months on 50 elective arthroscopic cases receiving an ISB and general anaesthesia. Patients were followed up in recovery, at 24 hours and 48 hours. Data including pain scores, discharge timings and patient experience were collected.

**Results**

Cases: rotator cuff repair (RCR) - 8 (16%), subacromial decompression (SAD) - 8 (16%), SAD + RCR - 18 (36%), arthroscopic stabilisation - 6 (12%), arthroscopic capsular release - 4 (8%), SAD + acromioclavicular joint excision - 6 (12%). Recovery: pain and nausea scores of zero - 47 (94%); block failure requiring intravenous opioids in recovery, and mild nausea - 3 (6%); time spent in recovery - mean 42 (19) mins. Discharge: same day discharge - 37 (74%); overnight admission -13 (26%), typically planned, however one failed block case was admitted for pain control. Time from operation end to hospital discharge (day cases) - mean 180 (47) mins. Post-operative pain scores at 24h: no pain - 12 (24%), mild pain - 18 (36%), moderate pain - 18 (36%), severe pain - 2 (4%), both of these cases experienced block failure in recovery. Post-operative pain scores at 48 hours: no pain -13 (26%), mild pain – 24 (48%), moderate pain -11 (21%), severe pain – 2 (4%), same two cases as above. No patients represented to hospital and there were no major complications. Anaesthetic experience: 42 (84%) were not expecting an ISB on the day of surgery; 21 (42%) felt anxious after the ISB was explained; 33 (66%) indicated they would 'definitely' have preferred information regarding ISB prior to admission; on 48h follow up, 49 (98%) however indicated they were glad they had an ISB and would have one again; all 50 (100%) reported high satisfaction scores; 10 (20%) had previous shoulder surgery without an ISB, and indicated a much improved experience this time around. We successfully demonstrated: a high level of patient satisfaction, early discharge and manageable post-operative pain following ISB for shoulder surgery. In response to our findings, in consultation with a patient focus group, we have produced an information leaflet to improve patient preparation for ISB. Additionally, to improve regional anaesthesia training in our unit, we have initiated a monthly teaching programme - 'Scanning Club', open to all grades of anaesthetists. Following our project and interventions, we have now been able to establish ISB as routine practice for all shoulder surgery in our unit.

**References**

1. Fredrickson MJ, Krishnan S, Chen CY. Postoperative analgesia for shoulder surgery: a critical appraisal and review of current techniques. Anaesthesia. 2010;65:608-24
2. Ilfeld BM, Wright TW, Enneking FK, Morey TE. Joint range of motion after total shoulder arthroplasty with and without a continuous interscalene nerve block: a retrospective, case-control study. Reg Anaesth Pain Med. 2005. Vol.30:429-33

***Third Place Poster:*** **An evaluation of critical care transfers from the Royal Orthopaedic Hospital following major complex surgery**

*B. Smith, T. Sutherland, S. Panchakshariah and L. Jeys*
*Anaesthetic Department, Royal Orthopaedic Hospital, Birmingham, United Kingdom.*

The Royal Orthopaedic Hospital (ROH) NHS Foundation Trust is one of five specialist orthopaedic hospitals in the United Kingdom. It carries out a wide range of major procedures including orthopaedic oncology, corrective spinal surgery and complex joint revision. As a standalone hospital it offers a level 2 High Dependency Unit for postoperative management but has no level 3 facility. If a patient requires on-going invasive ventilation, renal replacement therapy or significant cardiovascular support they require transfer to a level 3 unit. We set out to evaluate the case-notes of patients who, following major complex surgery, required a critical care transfer to identify clinical themes, with the aim to reduce the rate of future transfers.

**Methods**

We carried out a retrospective review of case-notes from patients, who following major complex surgery, had been transferred from the ROH to a level 3 critical care facility during a forty-month period between October 2014 and March 2018. Operations included in analysis were revision lower limb arthroplasty, oncological resections of the lower limb, pelvis and spine and corrective spinal surgery for scoliosis. The notes were reviewed taking account of patient age, co-morbidities, type of surgery, and the complication that arose leading to transfer.

**Results**

Overall 2715 major complex cases were carried out in this timeframe. The most commonly performed operations were distal femoral endoprosthetic replacement 559/2715 (20.6%) and posterior scoliosis correction 493/2715 (18.2%). From this cohort of patients 14 were transferred for level 3 care giving a transfer rate of 0.5%. Fifty percent of transfers took place on the day of the procedure and were related to immediate complications from anaesthesia or surgery. This included five cardiac arrests in the perioperative period. The most common postoperative complication that led to on-going critical care input was respiratory failure requiring ventilation (6/14) and multiple organ failure requiring ventilation and vasoactive medications (3/14). The median age for the transferred patients was higher than for the overall cohort (68 vs 49 years) with a higher proportion of patients with an ASA score of 3 (50% vs 13.8%). Higher co-morbidity burden in the transferred cohort is shown by a median Charlson Co-morbidity index of 5; 13/14 had a score ≥3 which is associated with higher postoperative complication rates [1].

**Conclusion**

The rate of transfer from our centre following these major cases is low when compared to other centres [2]. Transfers occurred mainly in older, co-morbid patients and generally took place in the immediate perioperative period. To improve safety going forward patients should be risk-stratified preoperatively and counselled.

**References**

1. H. Chikuda, H. Yasunaga, H. Horiguchi et al; Impact of age and comorbidity burden on mortality and major complications in older adults undergoing orthopaedic surgery: an analysis using the Japanese diagnosis procedure combination database; *BMC Musculoskeletal Disorders*; 2013;14:173
2. P. Dawson, A. Daly, J. Butler et al; Post operative complications in a dedicated elective orthopaedic hospital: transfers requiring specialist critical care support. *Ir Med J.* 2015 May;108(5):153-4

***First Place Oral:*** **Obstructive sleep apnoea in elective orthopaedic patients.**

*S. Aggarwal, V. Thanawala and J. Bonnington*
*Nottingham City Hospital, Nottingham, UK*

Literature evidence suggests that the STOP-Bang questionnaire be used as a screening tool for patients with suspected or undiagnosed obstructive sleep apnoea (OSA). Stepwise stratification has been suggested to identify patients with high probability of moderate to severe OSA to reduce the number of false positive cases [1].

A local audit carried out in July 2017 suggested that patients with a STOP-Bang > 4, BMI > 35, ASA > 2 and a venous bicarbonate of >28 had a high probability of moderate to severe OSA. As per the results of this audit, 26% of all the patients were referred for overnight oximetry.

Our hospital is considering the use of the two step STOP-Bang scoring system at pre-operative anaesthetic assessment clinic. The aim of our audit was to categorise patients' risk, based upon this stepwise approach (Figure 1), to aid identification of patients who required further investigations and referral for formal diagnosis of OSA. If a formal diagnosis was made, these patients were commenced on the appropriate treatment to hopefully alter the management and outcome of their peri-operative care. This audit was done to aid the development of a more streamlined and financially efficient pre-operative pathway for patients identified with suspected or undiagnosed OSA and to influence the postoperative course of these patients.

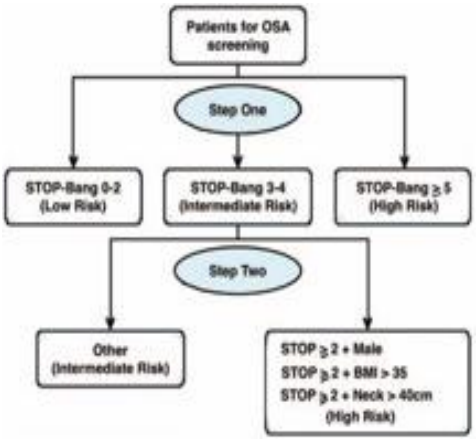


Figure 1. [1]

**Methods**

Our re-audit spanned one month which involved collecting the STOP-Bang score for all patients who came through elective orthopaedic preoperative assessment clinic during February to March 2018. Those considered high risk (STOP-Bang > 5) were sent for overnight oximetry; patients with a STOP ≥ 2 + male or high BMI (>35) or neck > 40 cm would also be considered as high risk and would be referred for overnight oximetry and have a venous bicarbonate done. Data collection was performed by the pre-operative assessment nurses with a standard form documenting patient details and STOP-Bang score. Data were analysed at the end of that month and outcomes of referrals subsequently followed up on hospital IT systems.

**Results**

Data from a total of 258 patients were included in the audit but 14 patients were discarded as no scores were documented on the audit forms. Fifteen patients had a STOP-Bang score of ≥ 5; two of these 15 were already undergoing treatment or had completed treatment for OSA; the other 13 (5.3%) were referred for overnight oximetry and eight (3.2%) of these were subsequently referred onto a Sleep Medicine Consultant. 82 patients had a

STOP-Bang score of 3-4; only three (1.2%) of these patients were stratified as high risk by two step criteria and were referred for overnight oximetry, and two (0.8%) of the three were referred to a Sleep Medicine Consultant.

Our data shows that by using the STOP-Bang tool in a stepwise stratified way, we have reduced the number of patients referred for overnight oximetry and subsequently to Sleep Medicine. By potentially reducing the number of false positive patients, it eases the pressure on sleep study service, minimises the waiting time for elective surgery, increases the throughput for elective orthopaedic services, thus making it more productive and efficient while simultaneously improving patient experience.

**References**

1. Nagappa M, Wong J et al. An update on the various practical applications of the STOP-Bang questionnaire in anesthesia, surgery and perioperative medicine. *Current Opinion in Anesthesiology* February 2017: 30(1);118-125.

***Second Place Oral:*** **Improving trauma services in a district general hospital**

*S.Abbott, I. Abdlaziz and H.Jenkins*
*West Middlesex University Hospita1, London, UK.*

It is well recognised that prompt, senior lead, co-ordinated multidisciplinary care is vital for the optimum management of patients with neck of femur fractures [1]. These patients are often high risk, elderly, with multiple co-morbidities. In addition it is estimated that that running costs for an operating theatre average approximately £1200 per hour [2]. Improving utilisation has obvious cost saving implications. This quality improvement project aimed to improve trauma theatre efficiency and quality of peri-operative care, particularly in the management of neck of femur patients with reference to AAGBI 2012 and the Anaesthesia Sprint Audit of Practice (ASAP) 2014 [3, 4].

**Methods**

The audit was registered locally and ethical approval was not required. Data was initially captured in the form of two separate questionnaires over an eight-week period. These addressed patient demographics, anaesthetic data, timing of the different stages of the patient journey to theatre, communication and reasons for delay. The results were presented at a multidisciplinary local audit meeting and the following changes were suggested. Only anaesthetic consultants with an interest in trauma or specialty doctors with equivalent trauma experience were to be assigned to the list on the rota. The patients were to be reviewed by the on call anaesthetist the night before and the wards given a copy of the list to allow preparation and optimisation of the first patient. A brief, early meeting at 8am before every list was performed to address any changes. A formal dedicated Saturday trauma list was also created to minimise the waiting list. Finally, a teaching program on performing fascia iliaca blocks for fracture neck of femur patients was instigated in the anaesthetic department and A&E by lectures and workshops. These had not been provided previously. The changes were re-audited two years later.

**Results**

There was an increase in consultant lead anaesthetic care from 52% to 82% of cases. Delivery of a team briefing improved from 53% to 82%. Delays in arrival of the first patient to the anaesthetic room dropped from 73% to 51%. The first patient had been reviewed overnight in 94% of cases to allow for medical optimisation. Neck of femur patients operated on within 36 hours of arrival in A&E improved by 6% and fascia iliaca blocks were offered in 100% of cases and performed in 81%. The results demonstrate a significant improvement in efficiency and quality of care of trauma patients in a district general hospital.

**References**

1. National Clinical Guideline Centre, (2017) [The Management of Hip Fracture in Adults]. London: National Clinical Guideline Centre. Available from: www.nice.org.uk/guidance/cg124/evidence/full-guideline-pdf-183081997

2. Institution for Innovation and Improvement. Improving quality and efficiency in the operating theatre [Internet]. Coventry: NHS;. Available from: http://harmfreecare.org/wp-content/files_mf/Improving-quality-and-efficiency-in-the-operating-theatre.pdf
3. Association of Anaesthetists of Great Britain and Ireland. Management of proximal femoral fractures 2011. Anaesthesia 2012; 67: pages 85-98.
4. RCP and the Association of Anaesthetists of Great Britain and Ireland. National Hip Fracture Database. Anaesthesia Sprint Audit of Practice, 2014 Available from: www.nhfd.co.uk/20/hipfractureR.nsf/4e9601565a8ebbaa802579ea0035b25d

***Third Place Oral:*** **Chloroprocaine spinal anaesthesia for day case knee arthroscopy**

*R.J.S. Hudson MBChB FRCA and R. Erskine MBBS FRCA*
*Royal Derby Hospital, Derby, UK*

Spinal anaesthesia possesses many of the desirable features for day case anaesthesia, including reduced analgesia requirements and PONV, avoidance of sedation and more rapid return of appetite and recommencing oral intake. However, it has previously not been a popular choice in the UK for day case procedures, largely due to the lack of short acting spinal drugs. Chloroprocaine 1% has been licenced for intrathecal use in the UK since 2013 for procedures of up to 40 minutes. We have been able to use it for patients undergoing short, day case procedures in urology, gynaecology, general surgery and orthopaedic day case for 5 years with over 3000 cases to date. Knee arthroscopy is our commonest such procedure in which chloroprocaine spinal anaesthesia has been shown to be associated with a significantly shorter time to discharge and to cost half as much as total intravenous anaesthesia [1]. We report a series of cases noting adequacy of block, complications, and patient satisfaction.

**Methods**

We looked at 652 patients having therapeutic knee arthroscopy under chloroprocaine spinal anaesthesia. All patients received 4-5ml of 2-chloroprocaine 1% via a 25 or 27g Sprotte spinal needle. The majority received intravenous midazolam 0.5-4mg prior to spinal anaesthesia to reduce anxiety. The operations were performed by different surgeons, both trainees and consultants. We recorded surgical time, intraoperative interventions and postoperative urinary or mobilisation problems. We also asked patients to rate their anaesthetic experience as very poor, poor, adequate, good or excellent and whether they would choose to have the procedure performed under the same anaesthetic in the future should they need the procedure again.

**Results**

Mean surgical time was 26 minutes (Range 22-58, IQR 25-38).

Four patients (0.6%) required a repeat spinal due to inadequate block at 10 minutes and two patients (0.3%) required supplementation of analgesia with Alfentanil on skin incision, but no patients required conversion to general anaesthesia. Whilst a number of procedures exceeded 40 minutes none of these patients reported experiencing any pain. Two young male patients developed profound bradycardia which resolved with atropine. There were no cases of urinary incontinence or retention and no delayed discharges due to prolonged motor or sensory block. Two patients experienced a headache post-op both of which resolved spontaneously. Eight (1.2%) would not choose the same anaesthetic again despite describing it as adequate or good. The remainder (98.8%) rated their anaesthetic experience as good or excellent, stating they would choose it again in future if offered the choice. In fact, a number of patients asked why they had not been offered this anaesthetic on previous occasions. This study shows there is strong evidence that the availability of chloroprocaine in theatre increases patient and anaesthetist choice of available acceptable anaesthesia for knee arthroscopy lasting up to 58 minutes.

**References**

1. Gebhardt V[1], Zawierucha V, Schöffski O, Schwarz A, Weiss C, Schmittner MD. Spinal anaesthesia with chloroprocaine 1% versus total intravenous anaesthesia for outpatient knee arthroscopy: A randomised controlled trial. Eur J Anaesthesiol. 2018 Oct;35(10):774-78

# BSOA WINTER NEWSLETTER

***Another exciting event in May 2019…***