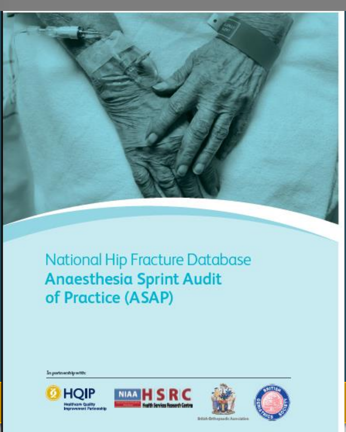

An re-audit of anaesthetic management of hip fractures - are we doing it right?

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INTRODUCTION

The Anaesthesia Sprint Audit of Practice (ASAP) was a collaboration between the Association of Anaesthetists of Great Britain and Ireland and the National Hip Fracture Database in 2013. It collected data from 182 hospitals' and looked at compliance with guidelines of hip fracture peri-operative care.

Their recommendations aimed to reduce substantial variation in hip fracture management against key standards[1] set in these guidelines.

Princess Alexandra Hospital was part of ASAP and our audit investigated whether our department made any improvement to current practice to adhere with guidelines and key recommendations.

METHOD

Prospective data collection for four weeks, commencing December 2014. All patients with traumatic hip fractures undergoing surgery were included. The same audit data collection sheet from ASAP was used and included eight subheadings:

• **General anaesthesia** *Induction, maintenance, airway, ventilation*	• **Co-morbidities**
• **Nerve block**	• **Specialist grade in theatre** *Anaesthetist, surgeon*
• **Spinal anaesthesia** *Sedation, supplemental O_2, patient position*	• **Bone cement implantation syndrome (BCIS)** *Hypoxia, hypotension, CV collapse*
• **Injectate** *Drug, concentration, baracity, volume, opioid*	• **Intraoperative blood pressure** *Pre-op, lowest systolic/diastolic peri-op.*

RESULTS

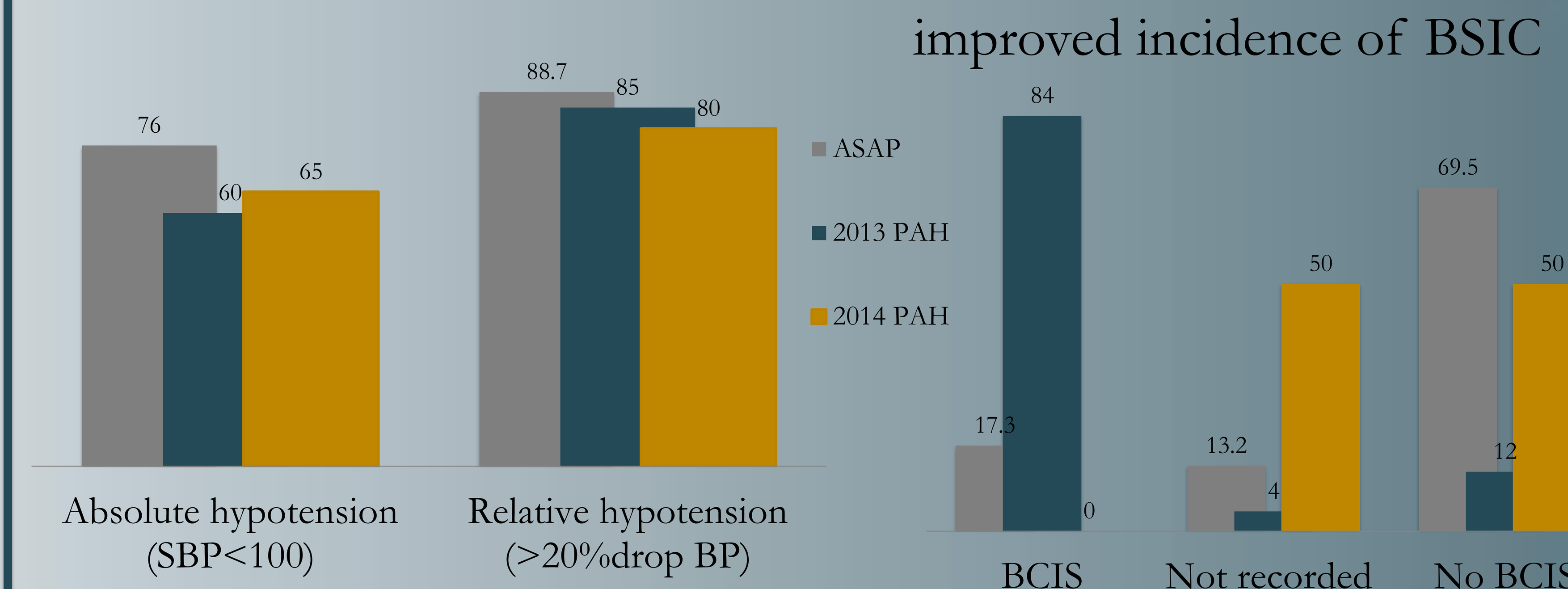
20/25 patients were captured during this period (80%)

❖ **Areas of good practice:**

Standard	No. of patients	%
Anaesthetic to be performed by anaesthetist with appropriate level of expertise	20/20	**100**
To consider spinal anaesthesia	12/20	**60**
To use 0.5% hyperbaric bupivicaine in spinal	12/12	**100**
Fentanyl to be used if opioid given in spinal	12/12	**100**
Positioning of patient – lateral with bad side down	11/12	**92**

❖ **Improved areas of good practice:**

1. Allowing spontaneous ventilation under general anaesthesia (45%)
2. Avoiding hypotension: tighter BP control
3. % Patients being assessed for BCIS: improved incidence of BSIC



❖ **Areas for improvement:**

1. Only 40% of patients received perioperative nerve blocks
2. 100% of patients received sedation BUT there was a wide variation in sedation drug choice.
3. An increased incidence of combined general and spinal anaesthesia (3% to 15%)

References:

1. Falls and Fragility Fracture Audit Programme National Hip Fracture Database *Anaesthesia Sprint Audit of Practice* 2014
2. Association of Anaesthetists of Great Britain and Ireland. Management of Proximal Femoral Fractures 2011. *Anaesthesia* 2012
3. The management of hip fracture in adults. Clinical guideline CG124. *NICE*, London 2011 (http://guidance.nice.org.uk/CG124).
4. Baker PN, Salar O, Ollivere BJ, et al. Evolution of the hip fracture population: time to consider the future? *BMJ Open* 2014;4:e004405.

DISCUSSION

Why do we care?

Hip fracture is a major public health issue and carries an annual health and social care cost of **two billion pounds**. With an incidence of around 80,000 per year, it is the most common reason for an older person to have an anaesthetic and it carries a significant risk of morbidity and mortality[3,4]. Both of these can be reduced by prompt surgical fixation and the outcome can serve as a marker of the quality of hospital care across many disciplines and departments[1].

How do we improve?

Evidence suggests that better outcomes are achieved with standardisation of practice. Based on current guidelines, there are a few key standards for which evidence base is most robust and where ASAP identified substantial variation in practice. If we can address these key areas, adhere to approved guideline and standardise practice, we can try ensure optimal peri-operative care[1]:

Offering peri-operative nerve blocks

- Implement teaching programme

Reducing incidence of hypotension

- Emphasis on not mixing general and spinal anaesthetics
- Strict adherence to maintenance of MAP

Reducing inconsistency to the approach of spinal anaesthesia

- GA ***or*** RA
- Education on choices of sedation
- An area of good practice for PAH

Increasing awareness of BCIS

- Guidelines posted in orthopaedic theatres
- Multidisciplinary teaching sessions