

ANAESTHETIC Sprint Audit of Practice: An Audit of Anaesthetic Management of Neck of Femur Fractures at a District General Hospital and Consequent Implementation of Local Guidelines



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Introduction

Hip fracture is the most common reason for a frail older person to need surgery and an anaesthetic, and its outcome serves as a marker of the quality of hospital care. The national Anaesthetic Sprint Audit of Practice (ASAP) sets out standards of practice against which individual hospitals can assess their practice, in respect of such patients. These standards are in turn based on guidelines set out by the Association of Anaesthetists of Great Britain and Ireland (AAGBI).

Aims

- To assess anaesthetic practices at Wexham Park Hospital in respect of hip fracture surgery, against the 12 Anaesthetic Sprint Audit of Practice Standards
- To establish local guidelines for anaesthetic management of hip fractures

The 12 Anaesthetic Sprint Audit of Practice Standards are:

Standard 1	Patients should be anaesthetised by a consultant or specialist with similar clinical experience.
Standard 2	Spinal/epidural anaesthesia should be considered for all patients
Standard 3	Spinal anaesthetics should be administered using hyperbaric bupivacaine (< 10mg) with the patient positioned laterally (bad hip down)
Standard 4	Co-administration of intrathecal opioids should be restricted to fentanyl
Standard 5	If sedation is required this should be midazolam or propofol
Standard 6	Supplemental oxygen should always be provided
Standard 7	Inhalational agents should be considered for the induction of general anaesthesia
Standard 8	Spontaneous ventilation should be used in preference to mechanical ventilation
Standard 9	Consider intraoperative nerve blocks for all patients undergoing surgery
Standard 10	Neuraxial and general anaesthesia should not be combined
Standard 11	Hypotension should be avoided
Standard 12	Patients should be routinely assessed for the occurrence of Bone Cement Implantation Syndrome

Results

The results of the audit showed both very strong and very weak conformity between local practice and the various ASAP Standards. Local practice was >80% compliant with 5 of the Standards, and in most cases, >90% compliant. Compliance with the remaining 7 Standards was markedly lower, in most cases being <30%. Notably, variance from the Standards was particularly evident with respect to dose of local anaesthetic used in subarachnoid block, choice of sedation agent, use of inhalational induction and spontaneous ventilation techniques and finally, monitoring for and management of hypotension and Bone Cement Implantation Syndrome.

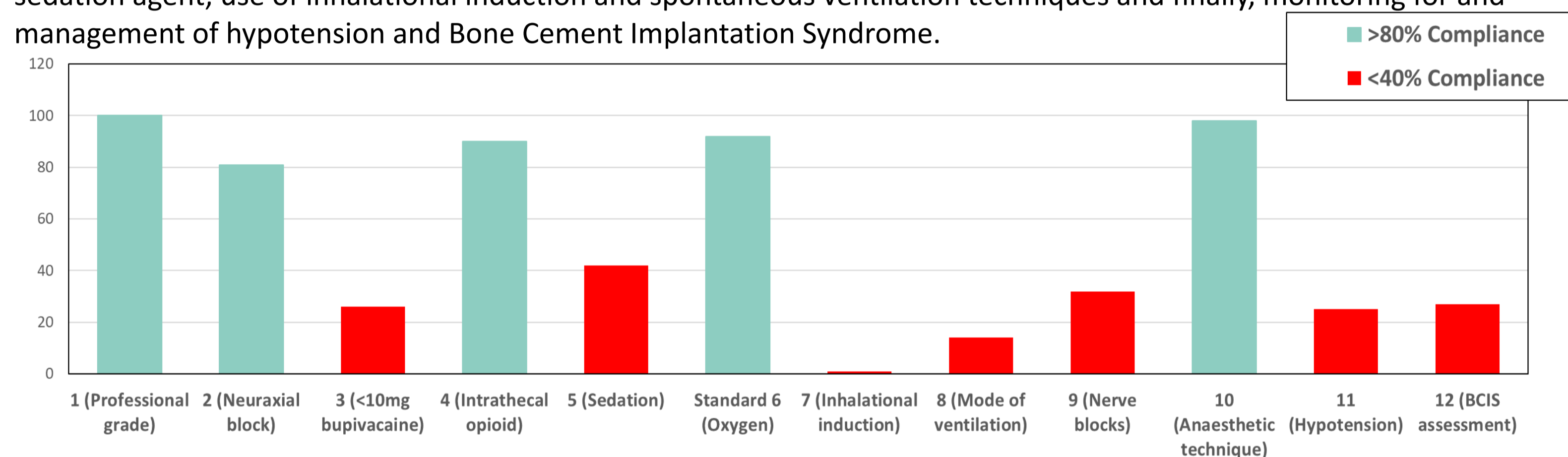


Fig 1. Compliance as assessed against each ASAP Standard

Conclusion

The ASAP Standards set out best practice Guidelines for the anaesthetic management of hip fractures. As the audit showed both good compliance with some Standards as well as areas with low compliance, the results were used to develop local trust-wide "Anaesthetic Management of Neck of Femur Fractures" Guidelines, which were published within 6 months of the audit.

General Considerations

- Anaesthetised by a Consultant or Specialist
- Anaesthetic monitoring as per AAGBI
- Close Blood pressure monitoring, with low threshold for invasive monitoring
- Awareness and caution about Bone Cement Implantation Syndrome
- Maintain temperature control
- Skin and pressure sore awareness

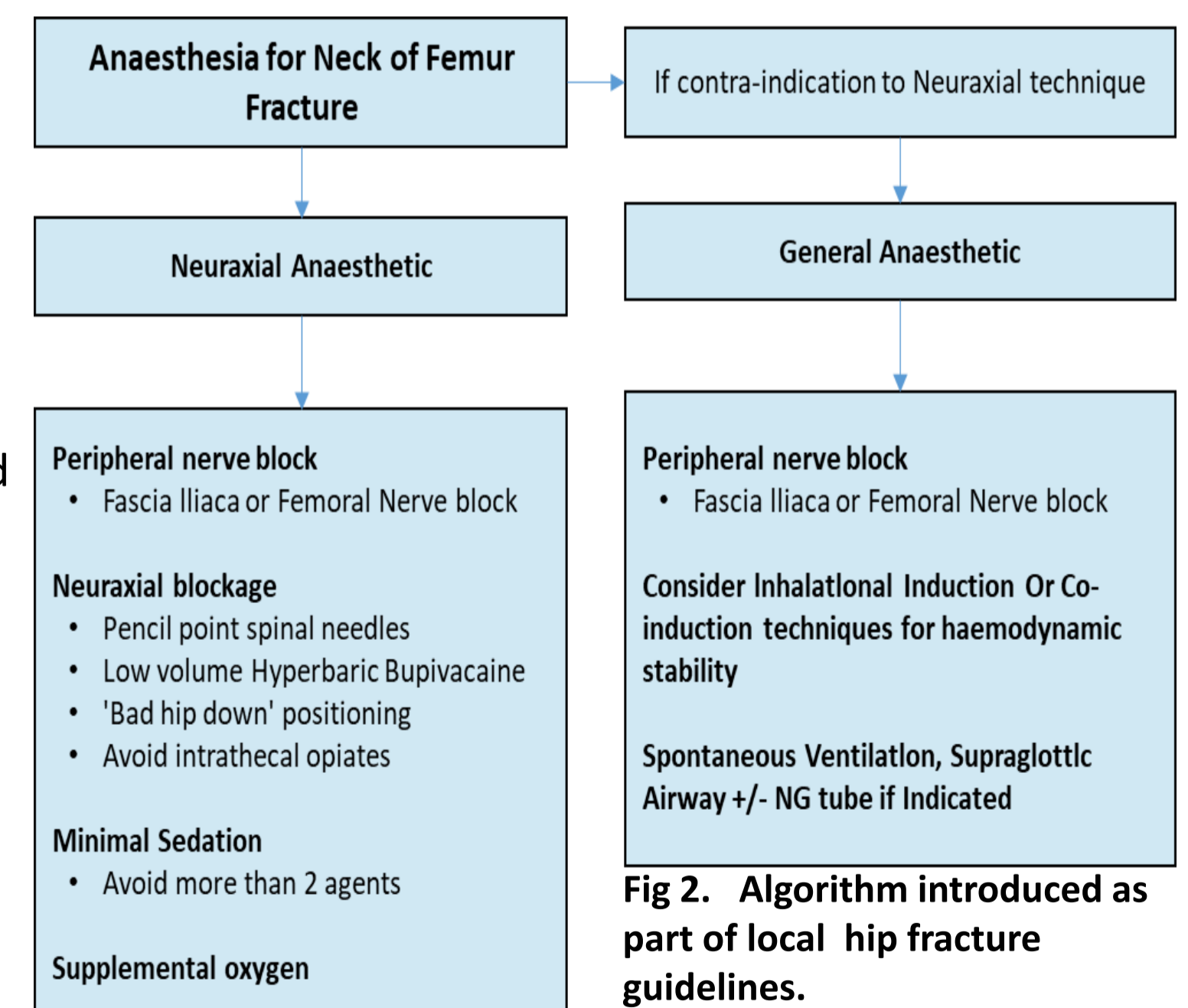


Fig 2. Algorithm introduced as part of local hip fracture guidelines.

Methods

Using the ASAP data collection proforma, the anaesthetic charts of 64 patients who underwent hip fracture surgery from 1 March to 30 April 2018 were assessed against the 12 ASAP Standards.

The data collected included grade of surgeon and anaesthetist, patient comorbidities, surgical procedure and anaesthetic technique, details of neuraxial and regional anaesthesia, pre-induction systolic, diastolic and mean arterial blood pressures and percentage drop in these values intra-operatively, complications arising from insertion of bone cement and duration of hospital stay.

References

- Association of Anaesthetists of Great Britain and Ireland, Royal College of Physicians, National Hip Fracture Database Anaesthesia Sprint Audit of Practice (ASAP) 2014 (<https://www.aagbi.org/sites/default/files/NHFD%20anaesthetic%20report.pdf>)
- Association of Anaesthetists of Great Britain and Ireland. Management of Proximal Femoral Fractures 2011. Anaesthesia 2012; 67: 85–98.