

A Re-audit of Intraoperative Hypotension in Fractured Neck of Femur Patients

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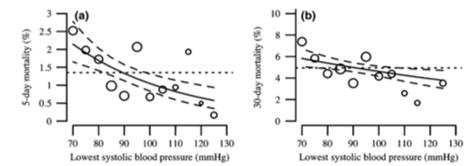
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INTRODUCTION

The 2013 Sprint Audit of Practice (ASAP-2) found a high prevalence of intraoperative hypotension in Fractured Neck of Femur patients. Relative hypotension (systolic BP reduction >20%) occurred in 89%, absolute hypotension (lowest intraoperative systolic BP <100 mmHg) in 77% and mortality at 5 and 30 postoperative days was associated with lower intra-operative blood pressures¹.

However, current AAGBI and NICE guidance does not include specific targets for managing blood pressure intra-operatively^{2,3}.

Secondary analysis of outcomes after 11,085 hip fracture operations from the prospective UK Anaesthesia Sprint Audit of Practice (ASAP-2)



METHOD

Two separate retrospective case note reviews were undertaken. The first between 1st November 2016 and 1st January 2017 and second from 1st November 2017 until 1st January 2018.

The duration of hypotension defined as a reduction of <20% of preoperative systolic blood pressure was recorded, along with vasopressor use. Severe hypotension of <40% of preoperative blood pressure was also recorded.

CHANGES INTRODUCED BETWEEN AUDIT CYCLES

Following the initial Audit in 2016 the findings were presented at a departmental meeting and a decision was made to change the alarm settings for hypotension on the anaesthetic machine in the trauma theatre

A 'geriatric mode' with blood pressure alarms which were triggered below 120mmHg instead of 90mmHg was installed and set as the default mode on that machine.

RESULTS

	2017 (n=38)	2016 (n=44)
Blood Pressure fell by <20% of starting value	28/38 74%	32/44 73%
Blood Pressure fell by <40% of starting value	5/38 13%	8/44 18%
Metaraminol Infusion used	23/38 61%	25/44 56%

	2017		2016	
Metaraminol infusion used?	Yes	No	Yes	No
Mean duration (mins) of Hypotension <20% starting value	18.8	41.1	31.9	26.8
Mean duration (mins) of Hypotension <40% starting value	0.76	1.5	4.8	0.26

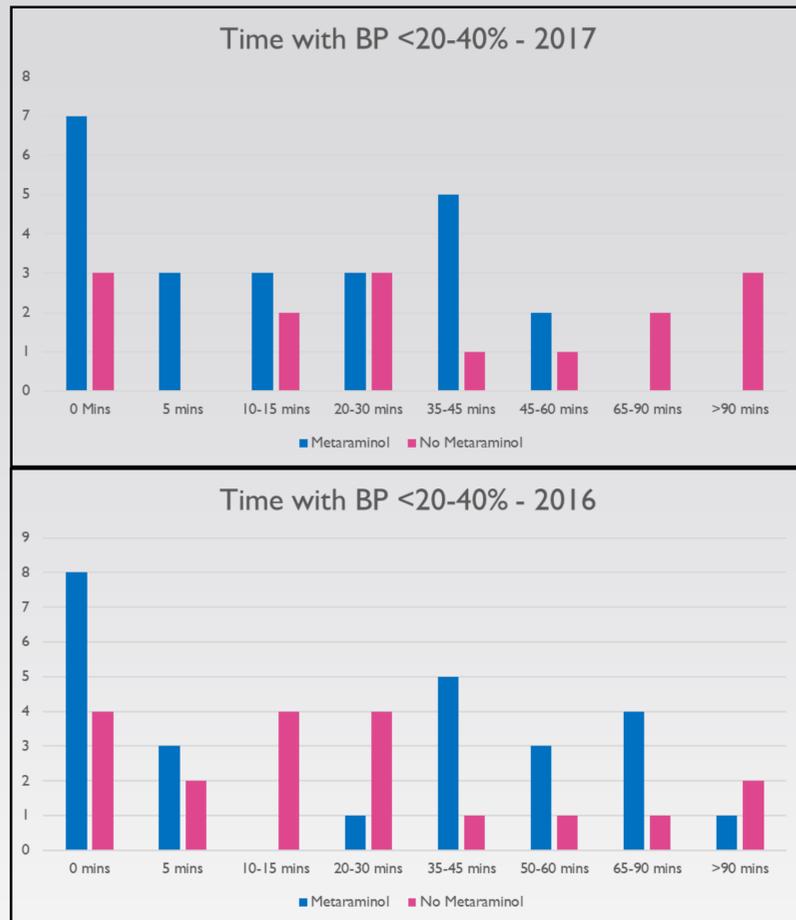


Fig 1. Incidence of hypotension (systolic blood pressure <20-40% less than starting value) by duration and metaraminol infusion use

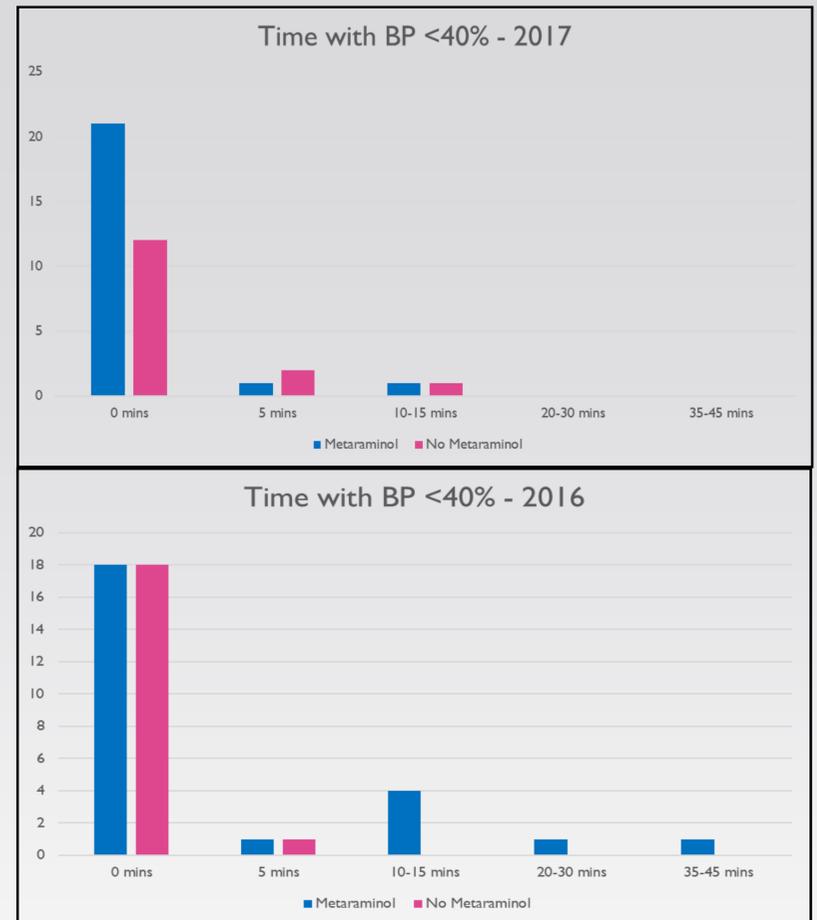


Fig 2. Incidence of severe hypotension (systolic blood pressure <40% less than starting value) by duration and metaraminol infusion use

DISCUSSION

- Avoidance of intraoperative hypotension remains challenging and the changes made since the first audit have had little impact on incidence in these patients.
- However the reduction in duration of hypotension where metaraminol infusions were used suggests that the changes to the alarm settings may have triggered tighter intra-operative blood pressure management.

REFERENCES

- White SM, Moppett IK, Griffiths R, et al. Secondary analysis of outcomes after 11,085 hip fracture operations from the prospective UK Anaesthesia Sprint Audit of Practice (ASAP-2)
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