

# Evaluation of intra-operative blood pressure changes during spinal anaesthesia for fractured neck of femour surgery

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## Introduction

Intra-operative hypotension is a frequent occurrence during anaesthesia for hip fracture surgery. Avoidance of immediate complications of surgery and anaesthesia, including hypotension, may improve early measurable post-operative outcomes.

## Methods

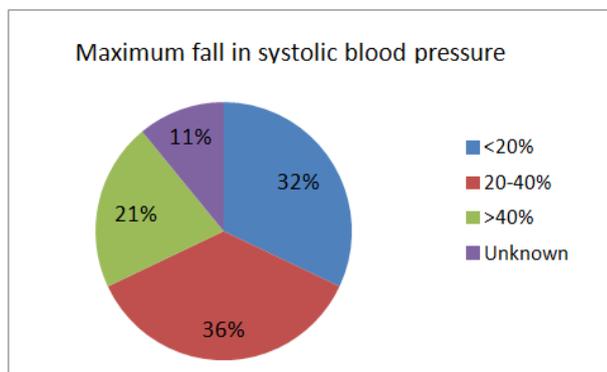
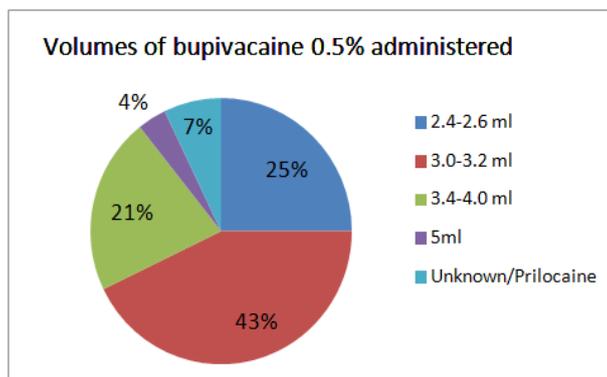
This was a retrospective audit. We reviewed anaesthetic charts of all patients aged 65 and above, who underwent surgery for fractured neck of femur under spinal anaesthesia between September 2016 and April 2017. In particular, we looked at systolic blood pressure (BP) changes over 30 min after administration of spinal anaesthetic.

## Results

28 cases were analysed. Mean age was 82, range 68-96 years. The smallest volume of 0.5% bupivacaine administered was 2.4 ml. In 18 cases (64%) the volume was between 3 and 4 ml. Sedation or intravenous analgesia for positioning was used in 22 cases (78.6%). A fall in systolic BP of more than 20% from pre-operative baseline occurred in 16 patients (57%), including 6 cases (21%) with over 40% drop in systolic BP. In 9 cases (32%) systolic BP fell to below 90 mmHg, representing absolute hypotension. The mean duration of hypotension was 20.6 min, range 10-25 min.

## Discussion

In our study, hypotension during spinal anaesthesia for fractured neck of femur surgery occurred in more than half of the patients. The options to reduce the incidence of hypotension include reduction of the dose of intrathecal local anaesthetic, vasopressor infusion, goal-directed fluid administration and also consultant delivered care. However, more studies are needed and also standardisation of anaesthetic practice nationally might lead to better outcomes for patients with fractured neck of femour.



## References

1. Association of Anaesthetists of Great Britain and Ireland. Management of proximal femoral fractures 2011. *Anaesthesia* 2012; **67**: pages 85-98
2. Wood RJ, White SM. Anaesthesia for 1131 patients undergoing proximal femoral fracture repair: a retrospective, observational study of effects on blood pressure, fluid administration and perioperative anaemia. *Anaesthesia* 2011; **66**:1017-1022