Surgical and Anaesthetic Consultant impact on Hip Fracture outcome

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INTRODUCTION

Hip fracture is the leading cause of geriatric accidental death in the UK[1]. The introduction of the National Hip Fracture Database (NHFD) in 2007, has revolutionised hip fracture management. Early surgical intervention and multidisciplinary team involvement, including surgeon, anaesthetist and orthogeriatrician, has been shown to reduce mortality rates. It is not known if mortality is affected by the training grade of doctors involved.

AIM

To determine whether the presence of a ***consultant surgeon or anaesthetist*** made a significant difference to ***30-day mortality*** of patients undergoing surgical fixation for ***fractured neck of femur (NOF)***.

METHOD

- Retrospective analysis of data performed on all fractured NOF patients operated on in our regional centre from ***January 2010 to November 2016***.
- Patient demographics, ASA status and 30-day mortality collected from our submissions to the NHFD and Hospital Information System used to directly derive admission and death dates.
- Data cross-referenced against theatre logbooks to ascertain the grade of anaesthetist and surgeon involved in each case.
- The patient groups were further split into two ASA categories to adjust for case mix (ASA 1-3 and ASA 4-5).
- Statistical significance was tested using a two-tailed chi-squared test.

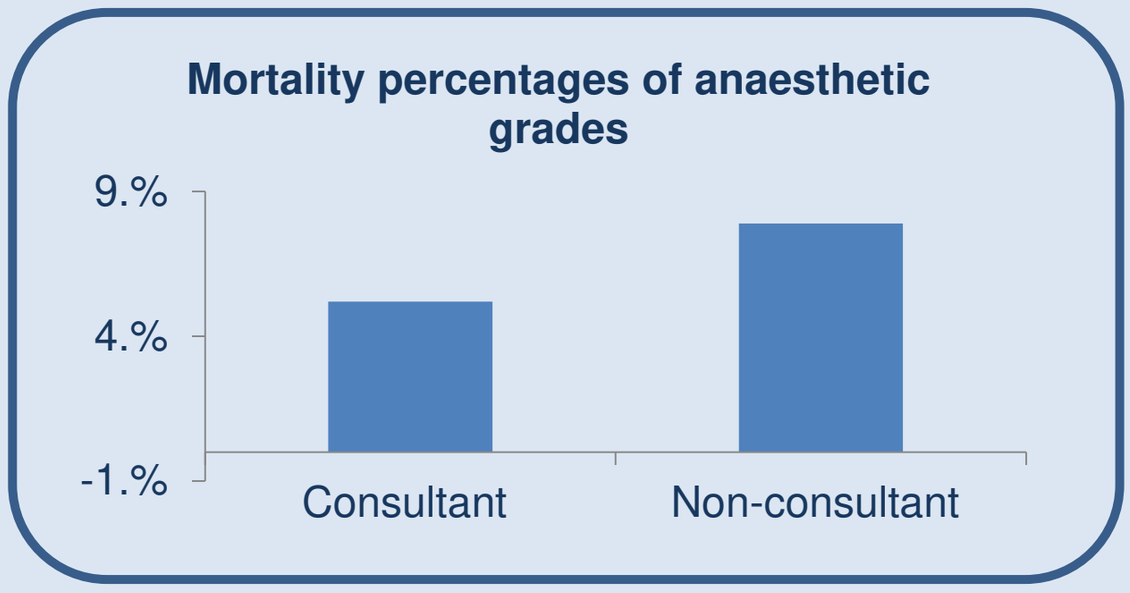
RESULTS

- Complete data set for 2,028 (81%) of 2516 patients from January 2010 to November 2016.
- Median age was 85 years (IQR 79.5-90) and 75% were female.
- Overall decrease in 30-day mortality from 7.8% (2011-12) to 5.3% (2013-14), associated with an increased anaesthetic consultant involvement, from 54% (2010-11) to 70% (2012-13)
- Reduced anaesthetic consultant 30 day mortality rates (5.2%) compared to non-consultant grade (7.9%) – p value 0.022.
- No significant difference in surgical grade mortality.

ANAESTHESIA	Consultant Mortality	Non-consultant Mortality	P value
All Patients	77 of 1472 (5.2%)	45 of 569 (7.9%)	**0.022**
ASA 4 & 5 Patients	33 of 274 (12.0%)	11 of 68 (16.2%)	0.41

SURGERY	Consultant Mortality	Non-consultant Mortality	P value
All patients	43 of 738 (5.8%)	83 of 1290 (6.4%)	0.65
ASA 4 and 5 Patients	16 of 136 (11.8%)	30 of 172 (14.9%)	0.52

Table 1: Table demonstrating surgical and anaesthetic consultant versus non consultant 30 day mortality rates.



DISCUSSION

Fractured neck of femur remains an injury with a high associated mortality. Patients are usually frail and elderly with multiple comorbidities. Recommendations from national and international bodies agree that anaesthesia should be provided by the highest grade of anaesthetist available. This review has shown that the presence of a consultant anaesthetist for NOF surgery is clearly associated with a reduced mortality in our regional centre. This highlights the importance of clinical experience in managing these frail patients and consultants should be leading their perioperative care.

REFERENCE

1. National Hip Fracture Database annual report 2016, Royal College of Physicians

Western Sussex Hospitals NHS
NHS Foundation Trust