A nationwide analysis of successful litigation claims in neurological practice

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Abstract
Objectives: Neurological practice has previously been highlighted as a high-risk speciality with regard to malpractice claims. We set out to study the nature of these claims in order to inform physicians about hazardous areas within their speciality and potentially alter clinical practice.

Design: Nationwide retrospective analysis of successful neurology and neurosurgery claims over a 17-year period.

Setting: We studied all successful claims occurring between 1995 and 2012 using the NHS Litigation Authority database, which collects data on claims made against clinicians practising in England and Wales.

Participants: Four hundred and twenty-three successful claims were identified during the study period.

Main outcome measures: The errors involved, the patient groups affected, the resulting mortality and the litigation payments.

Results: 63.1% of claims were due to negligence in neurosurgical care, whilst 36.9% were due to negligence in neurological care. Litigation payments were significantly higher in neurosurgery compared to neurology cases. Diagnostic error was the most common cause of litigation. The disease categories with the highest numbers of successful litigation claims were spinal pathology, cerebrovascular disease including subarachnoid haemorrhage, intracranial tumours, hydrocephalus and neuropathy/neuromuscular disease.

Conclusions: This is the first study of successful litigation claims against the NHS for negligent neurological or neurosurgical care and provides data to help reduce risk and improve patient safety.

Keywords
neurology, neurosurgery, litigation, negligence, medicolegal

Introduction

Previous studies of medicolegal claims have identified neurological practice as a high-risk speciality with regard to severity of patient harm and the high costs of subsequent litigation.1 However, there is a paucity of information about the nature of these claims. This information could inform physicians about common errors and help to improve clinical practice.

In the UK, the NHS Litigation Authority (NHSLA) collects data on claims made against clinicians practising in hospitals in England and Wales. In this study, we analysed successful neurology and neurosurgery claims occurring between 1995 and 2012 using the NHSLA database. We describe the errors involved, the patient groups affected, the resulting mortality and the litigation payments.

Methods

Data were obtained from the NHSLA for all litigation claims coded under the specialties of ‘neurology’ and ‘neurosurgery’ since its creation on 1 April 1995 until 1 March 2012. Two medically trained reviewers (TC and DPB) classified the data from successful litigation claims into pre-defined categories depending on disease group and type of error. Litigation payments were adjusted for inflation using the Retail Price Index (with reference to 2012 prices).2 We used the Chi-squared test to compare categorical data. Continuous data were not normally distributed; therefore, comparisons were made by Mann-Whitney U test or, if more than two groups, Kruskal-Wallis H test. Data were analysed using SPSS version 19.0 (SPSS, Chicago, IL).

Results

Overall, 1776 claims (949 men and 827 women) were identified involving neurology or neurosurgery during the study period. The modal patient age group was 36–45 years. A total of 1320 claims were ‘closed’, of which 514 (38.9%) had been successful. Claims associated with inadequate nursing care, administrative error, nosocomial infections or other specialities were excluded (n = 91). A total of 423 successful claims for negligence in neurological or neurosurgical care by doctors were therefore included in the final analysis (Table 1).
A total of 267 cases (63.1%) were due to negligence in neurosurgical care, whilst 156 cases (36.9%) were due to negligence in neurological care. Fatality rate was not significantly different between neurology (20.5%) and neurosurgery cases (18.4%). The total value of litigation compensation was £82,083,558. The median litigation payment was significantly higher in neurosurgery (£66,249) compared to neurology (£32,050) cases ($p < 0.001$). There was no significant difference in litigation amount between fatal and non-fatal cases. The most common locations were inpatient ward ($n = 167$), operating theatre ($n = 121$), outpatient department ($n = 86$) and emergency department ($n = 30$).

The disease categories with the highest numbers of successful litigation claims were spinal pathology ($n = 118$, median payment £90,051), cerebrovascular disease including subarachnoid haemorrhage ($n = 60$, median payment £77,519), intracranial tumours ($n = 46$, median payment £52,814), hydrocephalus ($n = 21$, median payment £66,933) and neuropathy/neuromuscular disease ($n = 18$, median payment £34,753). The litigation payments were not significantly different between disease groups.

### Discussion

Our study provides useful information regarding risk management in neurological practice. In line with previous studies, we found that neurosurgery was a higher risk speciality compared to neurology, with more successful claims and significantly higher value litigation payments. Our study adds to the existing literature indicating that diagnostic error is the most common cause of litigation.

The most commonly missed diagnoses were cerebrovascular disease, intracranial tumours and spinal pathology (which included compression by intervertebral discs, bone, epidural abscesses, osteomyelitis and subarachnoid haemorrhage).
spinal tuberculosis). Clinicians need to maintain a high index of suspicion for these pathologies. A lower threshold for ordering imaging may aid earlier diagnosis, but equally could increase detection of ‘incidentalomas’ and increase radiation exposure. The financial implications of such a strategy are unclear since the initial cost of imaging might be offset by subsequent healthcare savings. There were also seven cases of misdiagnosis of a disease-free patient in our dataset, highlighting the diagnostic challenges sometimes encountered in neurological practice.

Negligent performance of a procedure was the second most common cause of litigation, 36% of which involved surgery at the wrong site or a foreign body being left in situ. Over half of these claims were for spinal surgery. These errors are preventable and should be avoided by correlating patients’ test results with their clinical presentation, as well as strict adherence to perioperative protocols (such as marking the operation site with reference to imaging and systematic checking of surgical equipment perioperatively). Our study was unable to assess the effectiveness of the World Health Organization Surgical Safety Checklist in eliminating these errors since this was implemented in 2009 and many of the medicolegal cases arising since then have not yet been settled.

McNeill3 previously carried out a similar analysis of neurological negligence in the UK; however, all claims (including unsubstantiated ones) were examined in that study. Our analysis incorporates a further five years of data and focuses on successful claims to avoid the many frivolous claims which appear either incoherent or clearly do not involve malpractice.

Our findings, like previous American research5 but in contrast to McNeill’s study3, indicate that cerebrovascular disease accounts for a large number of litigation cases. Stroke is a common neurological pathology and this apparent increase could relate to the increased public awareness of stroke as a treatable condition. Over-representation of patients with intracranial tumours (the third most common litigation group) may be explained by the insidious onset of symptoms and poor prognosis in many of these patients.

Overall, the number of successful litigation claims in our analysis was relatively modest. When viewed in the context of annual NHS expenditure on damages and legal costs of £1.28 billion,6 the total litigation payment of £82,083,558 over 17 years was small. 38.9% of the total claims in our study were successful, which is high compared to 22% in a recent US study.4

Our analysis has several limitations. Firstly, we acknowledge that an unsuccessful claim does not preclude medical error since the legal definition of negligence requires that causation be proven. Secondly, the NHSLA database was designed primarily as a claims management tool rather than for risk management purposes; therefore, the accuracy and consistency of the data cannot be guaranteed. Thirdly, we have undoubtedly failed to capture all medical errors since many of these occur without subsequent complaint or litigation. Neither have we taken into account out of court settlements or smaller claims made before 2002 (when the NHSLA handled only claims above a certain monetary value defined by individual NHS trusts).

In summary, this is the first study of successful litigation claims against the NHS for negligent neurological or neurosurgical care and the study provides data to help reduce risk and improve patient safety.

Declarations
Competing interests: None declared
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Ethical approval: All data obtained was anonymised and freely available to the public through a Freedom of Information request, therefore ethical approval was not required.
Guarantor: DPB
Contributorship: TC organized and analysed the data, and wrote the first draft of the manuscript. DPB conceived the idea for the study, analysed the data, and revised the manuscript.
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