

Driving after severe head injury: the need for assessment

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SUMMARY

This paper reports on a survey of return to driving after severe head injury. It highlights the lack of information provision, low rates of Driver and Vehicle Licencing Agency (DVLA) notification, and poor uptake of driving assessments. The findings highlight the need for liaison between head injury services and general practitioners (GPs) when assessing driving fitness.

Keywords: head injury; driving assessment; driver and vehicle licencing agency.

Introduction

FOR many people with head injury, being able to drive post-injury is crucial for regaining independence.¹

The estimated annual admission rate of head injury is 270 per 100 000 in England and Wales, with around 5% being severely injured.² The common consequences of severe head injury include deficits in memory, attention/concentration, decision-making, and behavioural control. These deficits, plus specific difficulties such as visuo-spatial misjudgements, are likely to be vital for driving but are often difficult to detect without specialist assessment. Even when cognitive and personality changes are identified, the implications for driving are uncertain, since published research has failed to establish links with everyday driving.³ In the absence of established protocols, clinicians make judgements based to some extent on self-report, which is unsatisfactory because of a lack of insight and judgement in this population.

Our aim was to determine the proportion of severely head injured persons who return to driving and what advice they seek in doing so.

Method

We have recently completed a postal survey of head injured patients treated within our specialist community head injury service.⁴ The original subject pool consisted of 114 consecutive patients with a primary diagnosis of head injury, who had either driven pre-injury or held a current provisional/full driving licence. Sixty-five patients (57%) participated in the study. There was no response from 42 patients, four responses were returned uncompleted, and three patients had moved away. Fifteen responders had not driven pre-injury and are not discussed further here. Fifty responders (37 males, 13 females) had driven pre-injury. Thirty-five of the pre-injury drivers were still driving at the time, of whom 19 patients were available for interview with a relative to compare their ratings on a driving questionnaire. One patient became distressed during their interview and

could not complete the protocol.

The 50 pre-injury drivers were of a median age of 38 years of age (range = 18 to 65 years of age), at a median of 45 months (range = 5 to 241 months) post-injury (32 road traffic accidents [RTA], 13 falls, four assaults, and one gunshot wound). They were a very severely head injured group with a median post-traumatic amnesia (PTA) of three weeks (range = 1 to 335 days) and a median outcome of 'moderate disability' on the Glasgow Outcome Scale (Table 1).

Results

The 35 patients who were still driving at the time had relatively less severe head injuries (median PTA = two weeks) but a similar outcome to other drivers (Table 1). While the 18 drivers subsequently interviewed also had a median PTA of two weeks, none of the six current drivers rated as having 'severe disability' agreed to be interviewed.

Twenty-three (46%) pre-injury drivers reported discussing driving during consultations with general practitioners (GPs) or neurologists. Only one patient reported receiving written information about post-injury driving. While 35 (70%) pre-injury drivers had returned to driving at a median of six months (range = 1 to 48 months) post-injury, and 20 (40%) patients had standard driving lessons or simulated tests with instructors, only one person reported having a specialist driving assessment.

Twenty-two (62.9%) of the 35 post-injury drivers felt their driving was 'better' owing to reported compensation strategies (e.g. driving slowly). A number reported increased anxiety when driving. The six (17.1%) patients who felt that their driving was 'worse' attributed this to poorer concentration, reactions, and night sight.

Concerns from the 18 patient and family interviews included: perceived reductions in driving-related reaction times, stamina, concentration, and planning; and perceived increases in anxiety while driving, yet the Driver and Vehicle Licencing Agency (DVLA) was reportedly informed in only 10 (55.5%) cases.

Discussion

This survey suggests immense pressure to drive post-injury. Surprisingly, given the severity of their injury, 70% of our sample were driving. Worryingly, although many reported significant difficulties in driving, the DVLA were often not informed and only one completed a specialist driving assessment. Thus, many of our sample made their driving decision without specialist guidance.

While the study raises serious concerns, both the survey and interview samples were small. The surveyed pre-injury drivers were comparable to previously researched neurosurgical groups but it is of note that the six post-injury drivers with severe disability who responded to the screen all declined to be interviewed. The interview sample are therefore likely to have under-reported the extent of driving difficulties. Further large scale and longitudinal research is needed to guide assessment of fitness to drive. For our part, we are undertaking a research project with the Transport Research Laboratories to evaluate the value of combined clinical assessments with on-the-road evaluation and self-family reports.

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Table 1. Glasgow Outcome Scale.

	Survey sample (n = 50)	Current drivers (n = 35)	Interview (n = 18)
Death	0	0	0
Persistent coma	0	0	0
Severe disability (continuous supervision or help)	3	0	0
Severe disability (manage on own with considerable help)	7	6	0
Moderate disability (significant problems)	16	12	8
Good recovery (with residual symptoms)	24	17	10
Good recovery (with no symptoms)	0	0	0

There is a clear need for head injury professionals and GPs to liaise closely in managing driving fitness issues. We now routinely alert patients to their legal obligations to notify the DVLA, point them towards the *Headway* leaflet on driving,⁵ encourage them to seek specialist assessment (as appropriate), and often raise driving in clinical correspondence with their GP.

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