EDITORIAL COMMENTARY

Neuropsychiatric sequelae one year after a minor head injury

Lawrence Marshall, a distinguished consultant neurosurgeon, had a minor head injury in 1984 while skiing.¹ He was unconscious at most for 15 seconds. Cognitive symptoms were immediately present but improved over the course of many months; his work was not affected. On the other hand some people, after a blow to the head of equivalent force, will be severely incapacitated with psychological symptoms lasting years. These diverse outcomes reflect the complexity of the interaction between physiological and psychological processes in the development of symptoms after head injury.² Perhaps, therefore, a good starting point is to identify the size of the problem. This is what Deb *et al* have attempted to do in their paper (this volume, pp 899–902).

Several studies have looked at neuropsychological and neurobehavioural effects of mild head injury. Deb *et al* are the first to use a comprehensive psychiatric rating instrument to identify psychiatric morbidity after mild head injury. The study meets many of the criteria required for validity³—they recruited a reasonably sized unselected sample of people with minor head injury; the criteria for inclusion are explicit and reproducible; they achieved a good rate of follow up, and by and large the methods for assessment were on the basis of well validated measures which measured not only symptoms and impairments, but also disability.

Seventeen per cent of their cohort were rated as psychiatric cases at follow up one year after the mild head injury; 55% had symptoms of the postconcussion syndrome. Interpreting these figures is hampered by lack of control data—how many would have had symptoms regardless of the head injury? This is particularly relevant for their elderly patients of whom 62% had a mini mental state examination score <24. It seems likely that for many of them it

was cognitive impairment which put them at increased risk of head injury.⁴

The study nevertheless confirms clinical impression and other studies; a significant proportion of patients have disabling neuropsychiatric symptoms after a mild head injury.

At present there is little for the clinician to go on as he or she tries to predict who is going to do badly and why. The authors acknowledge this—their attempt to identify meaningful associations between possible risk factors and outcome was unsuccessful. The study was not designed to identify the processes by which some have neuropsychiatric symptoms while others escape. I suspect that this can only begin to be addressed with a longitudinal follow up study comparing a cohort identified early after injury as being at high risk of long term morbidity with a cohort at low risk.

But first we need to know whether the very heterogeneous neuropsychiatric symptoms to be seen after a mild head injury cluster into distinctive neuropsychiatric syndromes. If there are distinct syndromes then it is going to be necessary to disentangle them to explore properly the processes involved in the development of symptoms.

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- 2 Lishman WA. Physiogenesis and psychogenesis in the “post-concussional syndrome”. *Br J Psychiatry* 1988;153:460–9.
- 3 Dikmen SS, Levin HS. Methodological issues in the study of mild head injury. *Journal of Head Trauma Rehabilitation* 1993;8:30–7.
- 4 Teasdale TW, Engberg A. Duration of cognitive dysfunction after concussion, and cognitive dysfunction as a risk factor: a population study of young men. *BMJ* 1997;315:569–72.