Psychological consequences of traumatic injury†

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Whiplash injuries commonly occur in road traffic accidents, although early descriptions of railway spine following rail accidents would appear to be similar (Trimble, 1981). Initial acute symptoms include neck pain, restricted mobility in the cervical spine, headache, pain in the thoracic spine, radiating pain, paraesthesiae and/or weakness in the arms or legs (Spitzer et al, 1995). These somatic symptoms often are accompanied by psychological symptoms such as initial ‘shock’, a ‘dazed’ feeling, anxiety, anger, depression, difficulty concentrating, insomnia, lassitude, loss of libido, altered appetite and weight and, in some cases, feelings of helplessness, horror, despair and reliving experiences (Mayou & Radanov, 1996).

Most people who suffer whiplash injuries make a complete recovery but a significant proportion suffers enduring somatic and/or psychological symptoms. Symptom complexes persisting for more than 6 months sometimes have been referred to as ‘late whiplash syndromes’ (Ballal, 1982). The aetiology of the persistent symptomatology usually is multifactorial. There is a subtle interplay between organic factors causing physical injury and functional factors such as personality type, pre-existing psychiatric disease or vulnerability, substance misuse, gender, employment status, legal framework, unrelated but coincidental life events and related life events such as ill health, retirement, conscious and unconscious exaggeration and the effects of litigation.

The severity of any associated psychiatric disorder is variable. Some may have none or only a mild psychological disturbance, which may or may not be admitted to or, alternatively, identified by their family doctor. The majority of patients with mild to moderate psychological disorders usually are treated in primary care. Psychiatrists working in the secondary sector therefore may see a small but very skewed population who suffer from severe psychiatric disorder in association with a whiplash injury.

Conversely, psychiatrists acting as expert witnesses for the purpose of some form of medico-legal assessment may see a significant proportion of individuals with mild to moderate psychological disorders as well as those with more severe disorders. These conditions include acute stress reaction, adjustment disorder, phobia, post-traumatic stress disorder, anxiety disorder, depressive disorder, substance misuse, pain syndrome and rarely psychosis. In more severe cases where there has been an accompanying head injury with loss of consciousness, similar disorders may occur but post-traumatic stress disorders appear to be less frequent (Mayou et al, 1993). Personality changes and cognitive impairment may occur following contre-coup and penetrating head injuries (Lishman, 1987).

Pain syndromes often have an initial organic basis, which may be caused by the acceleration/deceleration force occurring at the time of the accident. There is a moderate amount of evidence that this pain may cause psychological distress (Lee et al, 1993; Wallis et al, 1997; Olivegren et al, 1999). The hypothesis that the psychological distress associated with whiplash injury is secondary to pain is supported by Wallis et al’s (1997) study of 24 patients who received radiofrequency neurotomy for their whiplash symptoms. In that study, those patients who experienced relief of their pain symptoms also exhibited resolution of their pre-operative psychological distress.

However, it is acknowledged also that the relationship between a subject’s mood and pain symptomatology is dynamic, with pain symptoms being aggravated or maintained by persistent psychological symptomatology such as heightened level of arousal, anxiety or depression of mood. In such situations, pain symptomatology may persist long after the organic pathology has subsided. These psychological symptoms, which augment or magnify the experience of pain, sometimes are referred to as ‘functional overlay’ by medical colleagues. This term has unfortunate pejorative overtones and may be used in a more general sense when there are inconsistencies on physical examination, such as the demonstration of non-organic medical signs (Waddell et al, 1980). These non-organic signs, referred to by Main & Waddell (1998) as ‘behavioural’ signs, are not by themselves a test of credibility or veracity. However, where associated psychological features are absent and/or there are inconsistencies in the patient’s history, there may be allegations that the patient is exaggerating or malingering. In a single clinical consultation or medico-legal assessment it may be difficult to identify confidently the true explanation for such phenomena and the matter may be determined only by a judge in court.

Kennedy (1946), when describing psychological symptoms associated with accidents, cynically stated: ‘a compensation nervous is a state of mind, born out of fear, kept alive by avarice, stimulated by lawyers, and cured by a verdict’. In one series of 50 consecutive medico-legal assessments in which pain was a significant symptom, 98% of the patients were considered to be exaggerating their disability (Kay & Morris-Jones, 1998). Cassidy et al (2000) considered that if financial compensation is determined by the continued presence of pain and suffering, then such an insurance system might promote illness and disability. In support of this hypothesis, they found a decreased incidence and improved prognosis of whiplash injury when the tort compensation system was changed to a no-fault system in Saskatchewan, Canada, in 1995.

The outcomes of accident-related syndromes vary, with some studies showing significant improvements in somatic and mental symptoms at 2 years (Olivegren et al, 1999) or when litigation had been completed (Miller, 1961), whereas other studies demonstrate persistent difficulties at follow-up (Mendelson, 1995; Kelly & Smith, 1981; Tarsh & Royston, 1985; Squires et al, 1996; Blanchard et al, 1998). Some of the variation in outcomes between the different studies may relate to factors such as small sample sizes, highly
selected populations, lack of a control
group, differences in mode of referral and
the orientation and attitude of the assessing
specialist. Most of the subjects assessed by
Miller (1961) and Kay & Morris-Jones
(1998) were referred by defendants’
solicitors or insurance companies. In
contrast, almost all the litigants in the
studies of Tarsh & Royston (1985) and
Mendelson (1995) were seen at the behest
of the claimants’ solicitors.
Mayou & Bryant (2001) addressed
some of these potential biases in a study
of consecutive attendees at an Oxford
accident and emergency department. They
found that just less than one-third had
significant psychiatric sequelae 1 year after
a road traffic accident and that seeking
compensation was associated with worse
physical, psychological and social out-
comes, although the direction of the latter
association was not clear because the
claimants usually had suffered more severe
injury and loss. These authors now examine
the relationship between whiplash injury
and psychiatric disorder in a controlled
study derived from the same cohort of
patients (Mayou & Bryant, 2002, this
issue). There are a number of interesting
findings, not least of which is the
observation that claiming compensation at
3 months was associated with pain at 1
year. If this finding is independent of the
severity of injury and is replicated in other
studies, then this further emphasises the
potentially harmful effect of litigation upon
an individual’s suffering and level of
functioning.

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DECLARATION OF INTEREST
None.

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