ABC of psychological medicine

Trauma

Richard Mayou, Andrew Farmer

Minor trauma is a part of everyday life, and for most people these injuries are of only transient importance, but some have psychiatric and social complications. Most people experience major trauma at some time in their lives.

Psychological, behavioural, and social factors are all relevant to the subjective intensity of physical symptoms and their consequences for work, leisure, and family life. As a result, disability may become greater than might be expected from the severity of the physical injuries.

Psychological and interpersonal factors also contribute to the cause of trauma, and clinicians should be alert to these and their implications for treatment. Tactful questioning, careful examination, and detailed record keeping are essential, especially for non-accidental injury by a patient or others:

- Ask for a detailed description of the cause of the incident
- Ask about previous trauma
- Ask about substance misuse—alcohol and drugs
- Look for patterns of injuries that may be non-accidental, deliberate self harm, or inflicted by others
- Check records
- If suspicious speak to other informants
- Discuss findings and suspicions with a colleague.

Dealing with the acute event

At a major incident it is important that members of the emergency services, especially ambulance staff and police, should seem calm and in control. This helps to relieve distress and prevent victims from suffering further injury. Explanation and encouragement can reduce fear at the prospect of being taken to hospital by ambulance. The needs of uninjured relatives and others involved should also be considered. Clearly recorded details of the incident, injury, and the extent of any loss of consciousness may be useful in later assessment as well as in the preparation of subsequent medicolegal reports.

Many people attend hospital emergency departments for minor cuts, bruises, or pain, or for “a check up” after being involved in an incident, whereas others attend their general practitioner. Immediate distress is common. Clear explanation, advice, and discussion at the outset can prevent later problems in returning to normal activities and enable early recognition of psychological and social consequences. A sympathetic approach is needed that includes suitable analgesia, reassurance about the likely resolution of symptoms, and encouragement to return to normal activity. Some patients may already be considering compensation, and records should be kept with this in mind.

Advice about return to work and other activities

Patients with painful injuries that should improve within days or weeks are often uncertain how to behave and how soon to return to work. The assessment is an opportunity to give advice about this. Patients need information on the cause of their symptoms, their likely impact on daily life, and a positive plan for return to normal activity; this includes discussing the type of work normally done, the employer's attitude to time away from work, and opportunities for a graded increase in activity. Good, rapid communication between hospital and primary care is essential.

Detail of *Very Slippery Weather* by James Gillray (1757-1815)

Lifetime prevalence of specific traumatic events (n=2181)

Type of trauma	Prevalence
Assault	38%
Serious car or motor vehicle crash	28%
Other serious accident or injury	14%
Fire, flood, earthquake, or other natural disaster	17%
Other shocking experience	43%
Diagnosed with a life threatening illness	5%
Learning about traumas to others	62%
Sudden, unexpected death of close friend or relative	60%
Any trauma	90%

Immediate effects of frightening trauma

- Causes a varied picture of anxiety, numbness, dissociation (feeling distanced from events, having fragmentary memories), and sometimes apparently inappropriate calmness
- Those who believe they are the innocent victims of others' misbehaviour are often angry, and this may be exacerbated by subsequent frustrations
- The term “acute stress disorder” is now used for a combination of distress, intrusive memories (flashbacks, nightmares), avoidance, and numbing in the months after the trauma. It occurs in 20-50% of those who have suffered major trauma
- The severity of emotional symptoms is much more closely related to how frightening the trauma was than to the severity of the injury; even uninjured victims may suffer considerable distress
- Severe distress is usually temporary but indicates a risk of long term post-traumatic symptoms

Immediate management

- Physical treatment, including adequate analgesia
- Sympathetic discussion of acute distress
- Explanation and appropriate reassurance about treatment and prognosis
- Appropriate encouragement for graded return to work and other activities
- Indicate what help will be available for continuing psychological symptoms and social problems
- Information and support to relatives

Immediate psychological interventions

Many employers and medical and voluntary groups recommend routine "debriefing" after frightening trauma. However, the evidence shows this is not only ineffective but may be harmful.

It is better, therefore, to concentrate on the immediate relief of distress through support and sympathetic reassurance and on practical help, while encouraging further early consultation if problems persist. This is especially so in groups who may be regularly exposed to frightening and distressing circumstances, such as members of the armed forces, police, and ambulance staff. Severe immediate distress and perception of the trauma as having been very frightening indicate an increased risk of chronic post-traumatic symptoms, and early review is recommended to identify those who need extra help. Victims of crime can be helped by referral to the charity Victim Support.

Later consequences and care

Treatment should include clear, agreed plans for mobilisation and return to optimal activity. Physiotherapists are often involved in rehabilitation and need to be aware of the psychological as well as the physical factors that are perpetuating disability. If necessary, a multidisciplinary approach should be established.

Chronic pain and disability

A small number of those who have suffered trauma continue to complain of physical symptoms and disabilities that are difficult to explain. Investigations are negative or ambiguous, and the relationship between doctors and patients may become fraught. Doctors may feel their patient is disabled for psychological reasons, whereas patients may feel that doctors do not believe that their symptoms are real and that they are unsympathetic and are not offering appropriate treatment.

Arguments about whether symptoms are physical or psychological are rarely helpful. Instead, it is essential to agree a coordinated behavioural and rehabilitative approach with patient and family that aims to achieve the maximum improvement. Unfortunately, there is a shortage of appropriate multidisciplinary specialist services for such people. This leaves primary care teams in the key role in monitoring progress and implementing a biopsychosocial approach to rehabilitation.

Psychological symptoms and syndromes

Depression, post-traumatic stress disorder, and phobic anxiety are common after frightening trauma and can be severe, whether or not there is evidence of previous psychological and social vulnerability. These psychological complications are not closely related to the severity of any physical injury. The general principles of assessment are those for similar psychological problems occurring in the absence of trauma.

Depression—A failure to recognise depression is distressingly common, perhaps because care focuses on physical injuries. Inquiries about depressive symptoms should therefore be routine.

Post-traumatic stress disorder is also common and disabling. It is characterised by intrusive memories of the trauma, avoidance of reminders of it, and chronic arousal and distress. It may be complicated by alcohol misuse. It usually has an early onset in the first few weeks (acute stress disorder). Many people improve rapidly but, if symptoms are still present two or three months after the injury, they are likely to persist for much longer. A few cases have a delayed onset. Psychological treatment is effective.

Phobic anxiety may be associated with post-traumatic stress disorder but can occur separately. A particularly common form

Effect of immediate debriefing on victims of road traffic injury. Those with high initial scores on the impact of events scale (intrusive thoughts and avoidance) had worse outcome than untreated controls at 4 months and 3 years

Reasons for people being offered help by Victim Support 1997-8

Unexplained and disproportionate disability and pain

- Lack of explanation or overcautious advice often leads to misunderstandings and secondary disability
- Delays in assessment and treatment exacerbate problems and make treatment more difficult
- Lack of coordination (between general practice, physiotherapy, hospital, etc) frequently exacerbates problems
- Low mood, misunderstandings, and inactivity worsen pain and disability
- Agree on consistent, collaborative plans with patient and family
- Early access to specialist rehabilitation and pain clinics providing high quality cognitive and behavioural psychological treatments

Psychologically determined consequences of trauma

- Acute anxiety, numbing, arousal (acute stress disorder)
- Anxiety disorder
- Major depressive disorder
- Post-traumatic symptoms and disorder
- Avoidance and phobic anxiety
- Pain and apparently disproportionate disability
- Unexplained physical symptoms
- Impact on family (such as family arguments, depression in family members)

Cognitive behavioural approach to treating post-traumatic stress disorder

- **Talking it through**—Encourage victim to discuss and relive feelings about the incident
- **Tackling avoidance**—Discuss graded increase in activities, such as return to travel after a road crash
- **Coping with anxiety**—Anxiety management techniques (relaxation, distraction)
- **Dealing with anger**—Encourage discussion of incident and of feelings
- **Overcoming sleep problems**—Emphasise importance of regular sleep habits and avoidance of excessive alcohol and caffeine
- **Treat associated depression**—Antidepressant drugs, limited role for hypnotics immediately after trauma

is anxiety about travel, both as a driver and as a passenger, after a road traffic crash. This anxiety may lead to distress and limitation of activities and lifestyle. Early advice about the use of anxiety management techniques and the need for a graded return to normal travel is helpful, but more specialist behavioural treatment may be required and is usually effective.

Detection of psychological problems

During a clinical assessment, a few brief screening questions can be useful as a guide to identify depression, anxiety, post-traumatic stress disorder and drinking problems. It is often helpful to speak to someone close to the victim who can offer an independent view.

Personal injury and compensation

Victims who believe that others are to blame for their trauma increasingly consult specialist lawyers, who are alert to psychiatric complications such as post-traumatic stress disorder and phobic avoidance. Acrimonious discussion about a small number of controversial cases of alleged exaggeration and simulation has obscured a more productive discussion of psychiatric disorder.

Head injury

Most head injuries are mild. These were once believed to be without consequences, but recent evidence has suggested that almost half of patients experiencing mild head injuries (Glasgow coma scale 13-15) remain appreciably disabled a year later. The effects of more severe head injuries on personality and cognitive performance may be greater than is apparent in a clinical interview and commonly affect "executive" functions such as social judgment and decision making.

Such deficits are often not detected by standard bedside screening tools such as the mini-mental state examination. Patients with head injury should therefore not be pushed to return to demanding activities too quickly, and there should be a low threshold for seeking a specialist opinion or undertaking psychometric assessment.

Consequences for others

Family members may also suffer distress, especially if they have been involved in the traumatic incident. Seeing the relatives of the traumatised person is usually helpful in the management of persistent problems.

Those involved in treating trauma will encounter particularly distressing incidents with severely injured victims and distraught relatives. These often occur when those involved in treatment are working under considerable pressure. Clear procedures for training and support of staff are essential. For those working in large emergency services the provision of regular specialist support is advisable.

Types of trauma

The pattern of consequences varies with the type of trauma experienced. All services that see trauma emergencies need management plans for psychological as well as medical care. This includes planning for major events in which there are many victims and for the much commoner road traffic and other incidents in which there are often several victims, some of whom may be severely injured and who may well be related or know one another. Emergency departments and primary care need procedures for helping the patients and for supporting the staff that are involved.

Treating avoidance and phobic anxiety

- *Diary keeping*—Encourage detailed diary of activity and associated problems as a basis for planning and monitoring progress
- *Anxiety (stress) management*—Relaxation, distraction, and cognitive procedure for use in stressful situations
- *Graded practice*—Discuss a hierarchy of increasing activities; emphasise importance of not being overambitious and need to be consistent in following step by step plan

Compensation

- Simulation of disability and exaggeration are uncommon in routine clinical contacts
- Many victims want recognition of their suffering as much as financial compensation
- Innocent victims of trauma are generally slower to return to work than those victims who accept that they were to blame
- Financial and social consequences of trauma and blighting of ambitions may be considerable and are often unrecognised
- Compensation procedures and reports may hinder development and agreement about treatment and active rehabilitation
- Compensation may allow interim payments and funding of specialist care to treat complications and prevent chronic disability

Head injury

- Assessment should involve questions about possible unconsciousness and post-traumatic amnesia
- Cognitive consequences of minor head injury are often not recognised
- Minor impairments may be obscured in clinical situations but be disabling in work and everyday activities
- Recovery may be prolonged
- Complaints of confusion and poor memory can be due to depression
- Specialist assessment may be needed

Relatives' needs

Immediately after severe or frightening trauma

- Make comfortable
- Inform relatives of trauma in a sympathetic manner
- Practical assistance
- Clear information

Later

- Information about injuries, treatment, and prognosis
- Discuss effects on everyday life
- Discuss needs for practical help and availability
- Ask about possible psychiatric problems and indicate help available

Types of trauma

- *Occupational*—Return to work often slower than in other types of injury. Liaison with employer essential. Compensation issues may impede return to work
- *Sporting*—May be associated with physical unfitness or with inappropriate activity for age
- *Domestic*—Assess role of alcohol, consider possible family and other problems, assess risk of further incidents
- *Assault (including sexual)*—Assess role of alcohol, keep detailed records, suggest availability of help for major, and especially for sexual, assault
- *Road traffic crash*—Psychological complications may occur even if no significant physical injury. Whiplash injuries should be treated by well planned mobilisation and encouragement, together with alertness to possible psychological complications

Disasters

All medical services and other institutions should have a disaster plan that is readily available and regularly reviewed. It should include a specification for immediate psychological care and information, together with proactive follow up so that psychological problems are identified early. Those involved in coping with disasters also require support and encouragement, and a minority may require specialist psychological help. The disaster plan should also set out procedures for giving information to relatives and offering them practical help.

Conclusion

The psychological aspects of trauma may be important, even when injury seems trivial. Clear, sympathetic care, which takes account of patients' needs, can do much to promote optimal recovery. Specialist advice should be sought for persistent problems within the first few months of an injury. Long delays in providing adequate assessment and treatment lead to unnecessary suffering and disability and may make such problems much more difficult to treat.

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The ABC of psychological medicine is edited by Richard Mayou; Michael Sharpe, reader in psychological medicine, University of Edinburgh; and Alan Carson, consultant neuropsychiatrist, NHS Lothian, and honorary senior lecturer, University of Edinburgh. The series will be published as a book in winter 2002.

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Evidence based summary

- Cognitive behaviour therapy is effective in treating post-traumatic stress disorder
- Early critical incident debriefing after trauma is potentially harmful

Sherman JJ. Effects of psychotherapeutic treatments for PTSD: a meta-analysis of controlled clinical trials. *J Trauma Stress* 1998;11:413-36

Wessely S, Rose S, Bisson J. Brief psychological interventions ("debriefing") for trauma-related symptoms and the prevention of post traumatic stress disorder *Cochrane Database Syst Rev* 2999;(2):CD00050

Suggested reading

- Mayou RA, Bryant B. Outcome in consecutive emergency department attenders following a road traffic accident. *Br J Psychiatry* 2001;179:528-34
- McDonald AS, Davey GCL. Psychiatric disorders and accidental injury. *Clin Psychol Rev* 1996;16:105
- NIH Consensus Development Panel on Rehabilitation of Persons with Traumatic Brain Injury. Rehabilitation of persons with traumatic brain injury. *JAMA* 1999;282:974-83

The print *Very Slippery Weather* is reproduced with permission of Leeds Museum and Art Galleries and Bridgeman Art Library. The table of lifetime prevalence of traumatic events is adapted from Breslau et al. *Arch Gen Psychiatry* 1998;55:626-32. The graph of effect of immediate debriefing on the psychiatric wellbeing of victims of road traffic injury is adapted from Mayou et al *Br J Psychiatry* 2000;176:590-4. The figure showing reasons for people being offered help by Victim Support is adapted from *Information in the Criminal Justice System in England and Wales. Digest 4*, London: Home Office, 1999.

Research samples are hard to obtain these days

I was a clinical research fellow coming to the end of my three year research programme on the aetiology of hepatobiliary cancers. One of my final studies was to analyse bile, collected via endoscopic retrograde cholangiopancreatography, with magnetic resonance spectroscopy to look for differences between patients with cancer and those without.

The initial spectroscopy readings were promising, with various bizarre, never previously seen peaks proudly announcing themselves. My initial excitement that I was on the verge of discovering the cause of biliary cancer was soon cut short, however, on realising that these peaks were probably due to the contrast agent used during cholangiopancreatography. Time was running out—I had to submit my thesis within a few months and still had other lab work to complete. What I needed, and quickly, was a fresh, contrast-free bile sample. But from where?

I was pondering on how I could acquire such a sample on the train home. My heart was beginning to sink, thinking of the months it would take to get ethical committee approval for collecting surgical or postmortem bile specimens, when I started to develop a pain in my back. By the time I got home, the pain had moved to the front of the abdomen. I decided to ignore it, putting it down to a particularly hard game of indoor football the previous day, and thought I would cheer myself up with a large curry. This was not a good idea. An hour later, I was curled up on the floor with an intense, colicky right upper quadrant pain, and (having examined my own abdomen) a classic Murphy's sign. Despite my assurances that it was probably nothing, my wife sensibly arranged to have me taken to hospital. There, first the on-call medical registrar (also a gastroenterologist) and then the surgical registrar diagnosed cholecystitis, and I was admitted.

I found it hard to believe that I was an inpatient with cholecystitis, even when an ultrasound scan the next day

confirmed an inflamed gall bladder full of stones. Fortunately, it was not septic or obstructed, and a week later I underwent a laparoscopic cholecystectomy. Before the operation, I had mentioned my research in passing to the team looking after me. They found the situation hilarious, but I was not amused. However, when I awoke after the operation, I was glad that I had mentioned it, for I found two specimen pots by my side. One contained my gallstones, and the other 30 ml of my own bile.

It was a surreal and painful experience but not without advantages. I have increased empathy with patients, particularly those in acute pain, and with their desire for quick analgesia and treatment. I also understand how tests that are relatively trivial to the treating doctors on a Friday night may seem of monumental importance to patients—in my case a fasting lipid profile. And, finally, I had obtained the fresh, unadulterated, contrast-free bile sample I needed so urgently.

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We welcome articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake*, or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk. Permission is needed from the patient or a relative if an identifiable patient is referred to. We also welcome contributions for "Endpieces," consisting of quotations of up to 80 words (but most are considerably shorter) from any source, ancient or modern, which have appealed to the reader.