The legacy of a critical illness

Improved management of the acute phase of a critical illness ensures that approximately two in three patients will eventually leave hospital, yet survival does not necessarily mean a return to full health. The more widespread use of follow-up clinics in patients discharged from an intensive care unit (ICU) has shown a substantial legacy in terms of physical, cognitive and psychological dysfunction. Problems are all too common during early convalescence from a life-threatening illness, and recovery can be slow and incomplete thereafter. The recognition and management of persisting disability among ICU survivors formed the subject of a meeting held at the Royal Society of Medicine in November 2006, and these topics are covered in the six articles that follow this editorial.

The prevalence and potential severity of the 'ICU syndrome' is increasingly appreciated. Physical sequelae such as difficulty in climbing stairs and reliance on a wheelchair outside the house are reported in 30–40% of patients within the first few months. Weakness and easy fatiguability reflect loss of lean body mass plus variable degrees of critical illness neuropathy or myopathy. The full pathophysiology of this generalized physical weakness is unclear, but it may first be revealed as delay in weaning patients off the ventilator in ICU. Joint pain and stiffness are common, while some patients have restricted lung function, unhealed wounds, pressure ulcers or contractures. The disability can persist for months or occasionally years. Patients with acute respiratory distress syndrome seem especially prone to impaired physical function after they have left ICU, even though the residual pulmonary deficit is relatively mild.

The degree of psychological morbidity in ICU survivors is often underestimated. As many as 20% of patients show levels of intrusion and avoidance consistent with post-traumatic stress disorder. Pathological levels of anxiety can be found in roughly one quarter of survivors and depression in one third; the authors have found little evidence of psychological recovery between 3 and 9 months after discharge (Sukantarat et al, 2007). Health-related quality of life, as measured by the short form-36 questionnaire, showed modest improvement in the physical health domains but none in the mental health domains.

Since normal sexual health depends on a combination of physical and psychological factors, it is a sensitive marker for overall quality of life. Sexual dysfunction is very common in the aftermath of a critical illness, as it is in patients who have undergone major surgical operations or trauma. Reasons include delayed physical recovery, depression, ongoing drug medication and poor body image associated with surgical scars and either massive loss of weight or gain as a result of subsequent inactivity. A period spent in ICU is a stressful time for both patient and relatives, and sexual activity may be avoided for fear of causing harm.

Many patients have acute cognitive dysfunction in the form of delirium while on the ICU, but it has now become apparent that some have chronic cognitive impairment after discharge. Diagnosis has been difficult because the neuropsychological tests can be complex and knowledge of baseline function is incomplete. Defects in memory and speed of mental processing can be detected in about half of ICU survivors over the next 2 years. The authors have also found clear-cut impairment in the executive function (frontal lobe) at 3 months, with partial recovery thereafter (Sukantarat et al, 2005). Patients have difficulty with sentence completion, pattern recognition and organization of tasks.

Greater awareness of the legacy of a critical illness has been an important advance, but what can be done to treat it? Preventive measures while the patient is still in ICU include the judicious use of sedative drugs, corticosteroids and neuromuscular-blocking agents, maintenance of good glycaemic control, graded stretching exercises and a general attention to the myriad details of supportive care. Reassurance can be given that physical strength is likely to return, albeit slowly. For those with disabling psychological distress, counselling, cognitive behavioural therapy, anxiolytics and antidepressants can all have a part to play. Good communication with the patient and family members is important, particularly when the patient leaves ICU and has to compete for attention with other patients on the medical or surgical ward.

Rehabilitation starts in hospital and continues in the community, with the patient taking responsibility for setting and attaining goals. So much time and effort has been invested in bringing patients through their critical illness that it is a great pity not to help them afterwards to regain a satisfactory quality of life. BJHM

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KEY POINTS

- Many patients make a slow and incomplete recovery from a critical illness.
- Causative factors include psychological trauma, sepsis, organ failure and drug therapy.
- Poor physical and psychological health plus cognitive dysfunction can severely impair their quality of life.
- Physical health and brain function tend to improve with time, but anxiety, depression and post-traumatic stress often persist for months or years.
- Rehabilitation should be started early and continued after discharge, providing support for both patients and relatives.