

Chapter 12

PSYCHIATRIC INTERVENTION WITH THE ORTHOPAEDICALLY INJURED

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INTRODUCTION

Injuries that result from disasters, whether natural or human made, have a deleterious impact not only on the injured, but also on their families and caregivers. The psychological trauma of combat may be overwhelming, especially when combined with physical injuries. Freud suggested that trauma is an extraordinary stimulus that disrupts homeostasis and can be too powerful to be worked through in a normal way. Variables contributing to this disruption

include the physical injuries, recovery from and long-term adjustment to the injuries, and associated losses and psychiatric sequelae. This is most obvious in the polytrauma patient, who may have orthopaedic injuries combined with other injuries, such as burns; traumatic brain injury (TBI); spinal cord, peripheral nerve, and genital injuries; internal organ damage; poor wound healing; blindness; deafness; or facial disfigurement.

TRAUMA AS A RISK FACTOR FOR PSYCHIATRIC DISORDERS

Morgan et al stated that nearly all survivors exposed to traumatic events briefly exhibit one or more stress-related symptoms.¹ In many instances, these symptoms dissipate within a reasonable period of time. However, O'Donnell et al reported that 20% to 40% of patients followed 1 year after trauma had a psychiatric disorder.² Hoge et al reported that 18% to 20% of soldiers met screening criteria for psychiatric diagnoses 3 to 4 months after duty in Iraq, where combat exposure was deemed high.³ Injury appears to increase the risk of developing psychiatric disorders above that of exposure to combat alone. Koren et al suggested that in the combat-injured, rates of posttraumatic stress disorder (PTSD) are more than 5-fold higher (16.7% vs 2.5%) than in similarly combat-exposed soldiers 15 months following injury.⁴ A study by Grieger et al shows that injured soldiers at Walter Reed Army Medical Center (WRAMC) had post-traumatic rates of psychiatric disorders equivalent to rates found in the combat-exposed soldiers in Hoge's

study, suggesting that early interventions during the acute medical-surgical care of combat casualties as WRAMC reduces the impact of injury as a risk factor for developing psychiatric sequelae.^{3,5}

Although most survivors of trauma will not manifest severe psychiatric disturbances, some appear more susceptible than others. Research demonstrates that low intelligence, low education level, poor vocational endeavors or achievement, absence of social support following the event, and female gender are risk factors for psychiatric sequelae to occur subsequent to trauma.⁶ Severity of the traumatic event, prior traumatic exposure, and additional life stressors may also contribute to psychiatric morbidity. Premorbid psychiatric disorders and personality disorders are thought to predispose individuals to posttraumatic psychiatric disorders. Smells, heat, light, sand, the backfiring of a car, and holiday fireworks are just some of the environmental stimuli that can trigger thoughts of past trauma and psychiatric symptomatology.

TRADITIONAL RESPONSES TO COMBAT AND INJURY

Service members have traditional fears as they engage in battle. Psychological responses to combat include the normal fear of injury or death, constant threats of being attacked, and existential worries about life. While in theater, sleep deprivation is an almost universal problem, as is the need for alertness in case of attack and a sense of vulnerability. These behaviors are all components of what is frequently described as the "battle-mind mentality," which may prevail for a long period of time even after a soldier returns home. Upon being injured, a soldier may initially exhibit disbelief (denial), begin prayer (taking a bargaining approach with religion), show anger or rage, and eventually express grief or depression. Emotional reactions resulting from physical injuries may persist even after evacuation to safety. Negative reactions may complicate recovery and rehabilitation and may lead to poor interactions with family members and staff.

Unit cohesion reportedly helps decrease the incidence of PTSD. It is therefore important to consider the impact of removing injured soldiers from their units and understand the importance of finding a strong environmental support structure for them.

Separation anxiety and "survivor guilt" may also play a significant role in a service member's psychological adjustment after an injury. The service member may experience overwhelming guilt for surviving a wartime experience that led to the death of a battle buddy. Survivor guilt may also extend beyond the injured soldier, adversely affecting many of the members within the unit. This may play a role in the subsequent interactions between injured service members and their units and may impact the support they receive. Although most patients deal with feelings of survivor guilt effectively, professional intervention is sometimes necessary to help reframe a patient's perceptions in an

appropriate manner. Surviving service members often feel their fallen comrades' families expect to hear comforting words about their loved ones' last moments. Whenever possible, service members are encouraged to attend their colleagues' funerals or military unit reunions because these events are often helpful during the recovery process. Most wounded warriors want to rejoin their former units when they are redeployed and every effort should be made to advocate for this reunion. Service members should be encouraged to let go of grief to maximize their own life potentials and thereby honor the fallen and their sacrifices.

Trauma victims employ various psychological defenses in an attempt to maintain homeostasis. Some of the more common defense mechanisms include dissociation, regression, intellectualization, rationalization, and denial. Dissociation may occur during or subsequent to trauma and is an attempt to delay the impact of the trauma. Regression occurs when a person temporarily reverts to an earlier stage of psychological development. For example, an adult who is hospitalized may become more dependent and act several years younger. In the early stages of hospitalization, dependency can be helpful. It can become pathological, however, if it lasts too long or is too extreme. Intellectualization is a mental mechanism in which the person engages in excessive abstract thinking or

extreme reasoning to avoid confronting conflicts or disturbing feelings. Rationalization is a similar defense mechanism in which patients develop elaborate explanations for their behavior that appear logical only to themselves, allowing them to escape anxiety about their actions and continue with the behavior. Denial can also be a healthy defense because it allows patients to distance themselves from the impact of the injury and perhaps decrease the immediate likelihood of being overwhelmed. However, it too can become a hindrance if prolonged.

When psychological defenses are overwhelmed, normal coping mechanisms may become dysfunctional. Generally, psychiatric disorders that emerge soon after injury are best characterized as adjustment disorders or acute stress disorders. More prolonged reactions include various anxiety and depressive disorders, such as generalized anxiety disorder, panic disorder, social phobia, agoraphobia, major depressive disorder, and other mood disorders, which may also be associated with more chronic forms of PTSD. Somatoform disorders and volitional symptoms are also observed in some service members returning from combat. Psychotic disorders are rarely observed in injured service members. Cognitive disorders may result from a comorbid TBI or from postconcussive sequelae.

CONCERNS OF THE SERVICE MEMBER WITH POLYTRAUMA AND LIMB LOSS

Service members who have sustained traumatic injuries, including amputation, present with myriad issues. In addition to physical limitations, they may fear failure, rejection, loss of military careers, and future under-employability. Orthopaedically and neurologically injured service members must also deal with pain and loss of body integrity and function. Psychological responses to this state include the classic symptoms of acute and chronic PTSD, such as emotional numbing, flashbacks, avoidance of reminders of the experience, and hyperarousal. They may express resentment, frustration, helplessness, hopelessness, and self-pity. Body image concerns may also be prominent (eg, one of the earliest concerns of many service members is fear they have sustained physical injury to or loss of their genitals). As recovery progresses, many service members wonder if they are going to be the same men or women that they were before they were injured. Those who are single may focus negatively on the future prospects of dating; all may question whether they will be able to play with children or partake in physical activities, such as athletics, recreational events, hobbies, and, in particular, sexual activities. The latter concern may be exacerbated by the lack of opportunity to test out sexual functioning in the earlier stages of rehabilitation. Later,

medication-related problems may decrease libido and impair performance, further increasing these concerns.

Service members who have lost one or more limbs or other body parts experience a host of additional concerns. They often struggle with a severely altered body image, and low self-esteem may ensue. They frequently worry about the impact of further surgical revisions, which may come to be seen as cutting them down in size. They may particularly fear rejection by loved ones and social stigma. Rybarczyk et al showed that a negative body image is correlated with an increase in adjustment problems following amputation.⁷ Phantom pain, though troublesome, may later exacerbate psychological sequelae by delaying focus on the emotional trauma.^{8,9} Others suggest that phantom pain may have nothing to do with psychological concerns, emphasizing that each individual's needs must be addressed independently.¹⁰

The loss of a body part is similar to the loss of a loved one and may be associated with a prolonged grieving process. The reintegration of self for the amputee has been described as occurring in three phases. The first phase involves shock, with feelings of cold and numbness; being dazed and confused; and feeling empty.¹¹ This manifests as the service member feeling overwhelmed and immobilized by daily tasks. The

second phase is the period of mourning, in which internal focus leaves little energy for others. In this phase, the service member's internal body image awareness comes in line with external awareness, but the patient still does not give up the past.¹² A prolonged period of mourning may hamper eventual adjustment. Follow-

ing the mourning phase, an adjustment phase ensues.¹³ As the patient deals with the demands of life, present resources and abilities are reorganized. Through a gradual increase in satisfying experiences and new-found competencies, the patient finally emerges with a new sense of self and worth.¹⁴

FACTORS INTERFERING WITH RECOVERY

There are many factors that interfere with physical and psychological recovery after injury. Lack of support from family, caregivers, and even the general public can be detrimental and can impede recovery. The Department of Defense provides travel and housing allowances to nonmedical attendants who stay with service members during recovery. The nonmedical attendants, who are often family members, can help with activities of daily living, dressing changes, and medication administration. Nonmedical attendants also provide companionship and often serve as advocates for the service member.

Feelings of low self-esteem, loss of wholeness, and fear of the future are common early in the recovery phase for combat-related trauma. Frierson and Lippmann describe social isolation as a common occurrence after amputation that needs to be addressed.¹⁵ Similarly, social discomfort and body image anxiety must be addressed and overcome with appropriate support and therapy.¹⁶ Some amputees may exhibit initial discomfort with their prostheses, which may represent rejection of themselves and their ongoing mourning. It is not uncommon for severely injured service members to believe that their injuries have left them less than human. Additionally, grief and sorrow over their personal loss may be complicated by grief over the loss of combat buddies injured in the same incident. Survivor guilt can contribute to depressive symptoms. Grief and sorrow are often expressed as anger, which may threaten relationships with spouses and families. Anger may eventually lead to emotional withdrawal.

A significant stressor in the orthopaedically injured service member is the need for frequent washouts of the affected limbs. Service members are often apprehensive of these procedures, which usually require general

anesthesia and may be associated with significant pain. Service members also fear additional surgeries that may result from poor healing of the affected tissues. A significant number of service members without initial limb loss may ultimately require amputation. Some service members fear losing a limb and plead for its preservation, while others seek elective amputation to minimize pain and shorten recovery and rehabilitation time. Before elective amputation, however, a thorough psychological evaluation is performed to assess capacity, ascertain secondary gain, and address underlying issues. Some injured service members who are hesitant to return to the community or who fear limited access to healthcare upon discharge may seek to prolong their hospital stays. A small number of service members may be motivated to extend their hospital stays because they believe (incorrectly) that will enhance their disability benefits.

It is important that professionals caring for injured service members believe in a positive outcome for their patients because their expectations will be reflected in their interactions and resultant care. However, this may be problematic in situations where the service member is not likely to return to full physical function. Providers must be aware that their verbal and nonverbal interactions are keenly observed by their patients and their patients' families. Providers often feel the need to correct their patients' overly negative and overly positive appraisals for recovery; however, hope and determination are important motivators for recovery and need to be encouraged. Providers should keep in mind that during the initial inpatient hospitalization, it is often too early to understand the full extent of even the most severe injuries and the impact they will have on the service member.

A PSYCHIATRIC APPROACH TO SERVICE MEMBERS WHO HAVE SUSTAINED TRAUMA OR COMBAT-RELATED INJURIES

A major concern in providing mental health care to service members is their reluctance to seek treatment because of a fear of stigmatization.³ To address this issue at WRAMC, the psychiatric consultation-liaison service developed a preventive medical psychiatry

(PMP) service.⁹ This service performs, without formal consult, routine initial screening evaluations of every service member admitted to the hospital for medical or surgical sequelae of the global war on terror. The goal of the PMP service is to foster acceptance of mental

EXHIBIT 12-1

CASE STUDY 1: AN EXPERIENCE OF THE PREVENTIVE MEDICAL PSYCHIATRY SERVICE

A 36-year-old soldier with a soft tissue injury to right eye, left femur and tibia fractures, and a right below-the-knee amputation responded in a sullen manner to his orthopaedic and physical therapy teams. Upon the initial visit, he denied any psychiatric problems had resulted from the improvised explosive device blast that had resulted in his injuries. He claimed he did not need psychiatric intervention and was concerned that the team referred him. The team reported poor compliance with treatment and disrupted sleep. When the soldier became aware that the psychiatric approach was routine and preventive, he began describing his concerns about his decision-making process while in theater that may have led to his unit receiving the blast it sustained. The preventive medical psychiatry service worked to reframe his experiences while advocating for him. As he accepted the routine of the approach, the soldier began to respond more favorably, appeared to assimilate the intervention, and cooperated more fully with his rehabilitation.

health issues and decrease stigmatization, thereby preventing or decreasing chronic disabling psychiatric disorders following trauma.

The approach to psychiatric intervention with injured service members has evolved over the years. The contemporary model of intervention has been developed based on lessons learned from past conflicts and events.¹⁷ For example, after the Pentagon attack on September 11, 2001, WRAMC staff were deployed to local hospitals to meet with injured survivors where, instead of using classic debriefing techniques that had not proven effective in the past, caregivers practiced empathic exposure (see below) and provided ongoing follow-up. Anecdotally, this technique was well perceived by those who were contacted, so the practice was continued with the casualties returning to WRAMC from Iraq and Afghanistan. While it has been reported that prolonged exposure may be a more efficacious treatment than cognitive restructuring for patients with acute stress disorder,¹⁸ the experience of the WRAMC staff has shown that injured service members may not be able to tolerate the stress of more aggressive psychotherapies while dealing with physical loss, pain, and profound life change. Following injury, all means must be taken to help the patient overcome losses and facilitate recovery. Initially, patients must believe the staff is there to protect them from further harm. Care providers should work

to facilitate sleep and rest and reduce physiological arousal and pain. This may be accomplished through medical and surgical means or through pharmacological interventions, hypnotic techniques, and psychological support. Care providers and family members of injured service members must strive to reduce unnecessary stressors.

It is important for caregivers to connect with their patients so patients can see providers as a healthy adjunct to their recovery. At times, patients may only need basic information as to what services or treatment options are available; other times, they may need guidance toward more direct coping strategies, such as distracting themselves and reframing conflicts. Negative appraisals by patients or their families must also be corrected; however, providers must take care to remind patients that although they will not be returned to their premorbid states, they can still achieve their goals and have satisfying lives. As patients join in a therapeutic alliance with their caregivers, they become more open to discussing complex issues, fears, and concerns about the future. This is facilitated with a flexible evaluation and treatment approach. Patient assets and strengths should be recognized and reinforced. The PMP service acts as a patient advocate and serves as a liaison between families and medical and support staff (Exhibit 12-1).

THERAPEUTIC INTERVENTION FOR PREVENTING PSYCHIATRIC STRESS DISORDERS

At WRAMC, the PMP service employs an approach known as the "Therapeutic Intervention for the Prevention of Psychiatric Stress Disorders." This program was developed to address the psychological needs of trauma victims, provide support to the individuals and their families, assess psychiatric status,

provide early intervention (when needed) without stigmatization, and support the medical and surgical staff. The major components of the approach include making mental health a routine part of trauma care, using a biopsychosocial approach to care, developing a strong therapeutic alliance with the patient

EXHIBIT 12-2

CASE STUDY 2: USING REFRAMING AND AFFIRMING TECHNIQUES

Following the blast from an improvised explosive device, the right ankle of a 22-year-old male was severed such that he could not stand to run. He described seeing his driver bleeding from a gunshot wound and he crawled to the driver's side, applied a tourniquet to his fellow soldier, and pulled him to safety. The caregiver focused positively on the soldier's actions, asking how he had the strength to assist the driver and help save his life.

and family, normalizing the patient's experience and psychological response to the trauma, providing education, using pharmacology and hypnosis when appropriate, providing empathic exposure therapy (see below), treating identified psychiatric symptoms, reinforcing resiliency, and promoting positive coping behaviors. Traditional psychotherapeutic and psychodynamic perspectives are also employed to help conceptualize specific patient problems and find solutions.¹⁹

Intervention timing is particularly important to the success of the approach. Following trauma, victims are less likely to attend to internal psychological distress until they are medically stabilized. Maslow described a hierarchy of needs, with a specific time and place for all interventions.²⁰ He suggested that patients' physiological needs have to be met first, followed by their needs for safety, belongingness, esteem, and self-actualization. Ultimately, therapy for resilience is ineffective while the patient is struggling for life or feels unsafe.

Horvath and Symonds found that the therapeutic alliance is meaningfully correlated with treatment outcomes,²¹ and Crits-Christoph et al found the therapeutic alliance is important in developing interactions that repair problematic ones.²² Marmar et al reported that addressing feelings leads to positive outcomes only after the therapeutic alliance has been established.²³

Therapeutic alliances with injured service members are used to help the injured process their ordeals

EXHIBIT 12-3

CASE STUDY 3: USE OF EMPATHIC EXPOSURE

Following the blast from an improvised explosive device, a 41-year-old service member with a soft tissue injury to the left eye and bilateral lower extremity fractures was hospitalized with an external fixator on his leg. The patient began having episodic tremors and seizure-like behavior without any explanation (his electroencephalography result was normal). A thorough psychological evaluation also appeared to be normal. After the development of a therapeutic alliance and applying techniques such as hypnosis and pharmacological management of sleep, it was discovered that the noise that was being generated multiple times a day from the patient's external fixator was similar to that created by the blast that had caused his injury; the sound was contributing to his symptom manifestation. As he was empathically exposed to his trauma, his symptoms dissipated.

through empathic exposure therapy. During this therapy, service members are usually seen for 15 to 20 minutes several times per week. They are asked to reflect on their traumatic experiences, with the suggestion that talking about them at the present will be helpful in the future. Empathic exposure allows patients to normalize their experiences and consolidate them in their memory, and may help them integrate the past trauma into a normal stream of consciousness. Providers are trained to offer rapid empathic responses to the patient's recall of the trauma and injury. Caregivers avoid confrontational approaches and instead employ nonthreatening techniques, responding in ways that emphasize patients' positive assets, such as, "How did you know to do that?" and "Where did you learn that?" Clinicians are encouraged to display acceptance, respect, empathy, warmth, advice, praise, affirmation, and a sense of hope while working with these patients. It is critical that providers are viewed as genuine in their concern and support of the patient while encouraging patients to elaborate on reactions relevant to the trauma and offering empathic validation (Exhibits 12-2 and 12-3).

PHARMACOLOGY AND OTHER TREATMENT INTERVENTIONS FOR ANXIETY, DEPRESSION, AND PAIN

In addition to the psychotherapeutic interventions discussed above, medications can be used to address patient needs and psychiatric symptoms. Although it is

beyond the scope of this chapter to present a detailed medication or other treatment approach to combat-trauma-injured patients, an overview of symptoms

and disorders most frequently encountered and general treatment approaches are discussed below.

In order to address the combat-injured patient's most urgent needs and to provide comfort (barring frank delirium), the primary focus should be on encouraging sleep, controlling pain, and alleviating anxiety symptoms, which most prominently present in the form of nightmares, hyperarousal, intrusive thoughts, and flashbacks. Before recommending medication, it is important to consider the patient's underlying medical condition, current medications, and allergies. Potential interactions should be reviewed because most psychoactive medications have the propensity to interact with other medications and antibiotics. Sleeping agents are recommended as needed, according to the patient's preference and medical situation. Hypnotic agents, such as zolpidem, may be helpful for problems with sleep initiation, but may not be as efficacious for problems with sleep maintenance, early morning wakefulness, or nightmares. Sedating antidepressants, such as trazodone and mirtazapine (both of which are fairly well tolerated, have few medication interactions, and may help address comorbid anxiety or depressive symptoms), are frequently used. Atypical antipsychotics have also been successfully employed to treat sleep disturbances with nightmares, and may be indicated in the presence of flashbacks or disorientation and emotional dysregulation due to multiple or high doses of pain medications or other medical issues. Quetiapine is used in low doses (25–75 mg) to capitalize on its sedative properties in this dose range and to minimize potential, although rare, adverse side effects. In this dose range, quetiapine appears to work largely by blocking histamine receptors, an action that has been associated with a decrease in the rapid eye movement stage of sleep. Prazosin has also proven effective for reducing nightmares in outpatients with PTSD,²⁴ but has not been studied in the inpatient polytrauma setting, in part because of concern over its cardiovascular effects.

Pain control is an important consideration for patients in all stages of recovery, but is particularly important in the earlier stages of treatment because proper management can set the stage for future

adequate responses. Conversely, poor pain control may heighten a patient's anticipatory anxiety for all procedures, interfere with sleep, and may eventually lead to problems with chronic pain. The psychiatric consultation-liaison service at WRAMC works closely with the medical, surgical, and pain services to achieve maximum patient comfort. Hypnotic techniques are frequently employed to help in this area.

More specific treatments for anxiety and depression depend on the associated disorder (if present), the severity of symptoms, and the patient's stage of medical recovery. Early during the course of medical treatment, anxiety may be associated with delirium because of the underlying medical condition, in which case a neuroleptic medication may be used to address anxiety, agitation, and disorientation. As the patient stabilizes, anxiety symptoms tend to ameliorate or consolidate into more recognizable disorders. As the service member physically heals and develops more cognitive reserve, more standardized treatment strategies may be used for the particular disorder identified (eg, more formalized cognitive behavioral therapy for anxiety or depression). Service members may then participate in supportive group or psychodynamic therapy, particularly if more developmental and interpersonal concerns appear to be impacting the current condition.

Selective serotonin reuptake inhibitors remain the medications of first choice to treat PTSD²⁵ and depression. Of these, sertraline and citalopram are generally preferred because of their tolerability and relatively decreased potential for drug-to-drug interactions. Benzodiazepines are generally avoided where possible, particularly in PTSD, because data that supports their use is lacking and they may result in addiction and worsen PTSD in the long term.¹ However, benzodiazepines are occasionally used to temporarily relieve severe anxiety and panic attacks. Patients are frequently already prescribed benzodiazepines for conditions such as muscle spasms or phantom limb pain. In this case, patients should be educated on the impact benzodiazepines have on anxiety, and the effects should be monitored. Treatment for persistent conditions may ultimately extend beyond the period of hospitalization.

HYPNOSIS

Absorption, focused attention, decreased vigilance, suggestion, dissociation, trance logic, rapid data assimilation, and time distortion are all components of hypnosis.²⁶ Patients often tend to be self-absorbed and focused on their somatic complaints in the presence of medical or surgical illness, and many psychologically

healthy individuals may have a hypnotic gift.²⁷ These individuals can constructively employ dissociation to distract themselves from physical and emotional trauma. When appropriate, they can weave dissociative elements into a normal stream of consciousness. By capitalizing on the rapid assimilation of data, they can

also learn new techniques at a faster pace. Hypnotic techniques that guide constructive thought processes help individuals cope with pain, insomnia, and injuries by allowing them to distance themselves from their treatment, feel safe, rapidly learn new coping techniques, and become productively engaged in the healing process.²⁸⁻³⁰ Experience at WRAMC has shown that service members can use hypnosis to control pain from surgery, wounds, washouts, burns, and phantom sensations, as well as to assist with medication augmentation. Hypnosis can provide a safe place for patients to work through or restructure their emotional conflicts (Exhibit 12-4).

EXHIBIT 12-4

CASE STUDY 4: USE OF HYPNOSIS IN TREATING PHANTOM LIMB PAIN

A 28-year-old male with a left below-the-knee amputation complained of phantom limb pain, which was described as the painful curling of his missing toes. He was taught to envision relaxing his foot and uncurling his toes. Using this hypnotic technique, he was able to reduce pain from an 8 to a 0 on a 10-point pain scale.

TRAUMATIC BRAIN INJURY ASSOCIATED WITH POLYTRAUMA AND AMPUTATION

Approximately one third of the service members injured in Iraq who require medical evacuation to WRAMC have been found to have TBI. Of these, about 50% are classified as having mild TBI, with the remaining half having moderate or severe TBI. Most TBIs occur with polytrauma and are common in service members with traumatic amputations. All service members with an injury history that may be associated with TBI (eg, blast exposures, motor vehicle accidents, falls, etc) are screened during the initial phase of their hospitalization by a specialized team from the Defense Veterans Brain Injury Center (this screen is in addition to the routine screening performed by the PMP service). A multidisciplinary team from the departments of neurology, neuropsychology, physical medicine and rehabilitation, psychiatry, physical therapy, occupational therapy, and speech language pathology provides ongoing assessment and treatment of these patients.

The PMP service provides clinical assessment of TBI and treats associated behavioral sequelae. This begins in the intensive care unit (ICU) for more severely injured service members, who generally arrive at WRAMC on ventilator support. In addition to the common problems of disorientation and frank delirium seen in patients with polytrauma as they are weaned from sedation, patients with TBI take considerably longer to become alert, are often agitated and disorganized, and are generally less able to participate in their own care. Families of service members with TBI are provided support and made aware that the prognosis for moderate to severe TBI is hard to predict and may be frightening and upsetting. In addition, staff members treating patients with more severe TBI can be nihilistic—a disposition that needs to be addressed by the consultation-liaison psychiatrist. Treatment of delirium and agitation often involves modifying the intravenous pain regimen, minimizing external stimulation, adding neuroleptic medication,

and, when other modalities fail, restraining the patient. Symptoms of hyperarousal, such as sleep disturbances, nightmares, and flashbacks, are common in service members in the ICU, and they can be worse with existing TBI. Preemptive treatment of hyperarousal with low-dose, atypical neuroleptics has proven to be especially effective in improving sleep and decreasing nightmares and flashbacks.

TBI in amputees often complicates rehabilitation. Significant deficits in cognition, memory, and awareness may preclude prosthetic fitting and training. Additionally, patients with TBI may manifest problems with impulse control. Their disinhibition and impulsivity may interfere with their care as well as disrupt others in treatment. Similarly, problems with mood and emotional regulation can manifest as anxiety, depression, and emotional lability and can complicate recovery. Behavioral problems, including apathy, lack of motivation, dependency, and passive childlike behavior, are also commonly seen in this patient population. Somatic symptoms, such as sleep disturbances, fatigue, slowness, dizziness, headaches, and noise sensitivity, are likely to be magnified in patients with TBI.

Because of the magnitude of complications associated with TBI and their disruption of amputee rehabilitation, service members with significant cognitive, emotional, or behavioral problems related to TBI are best managed in a TBI center of excellence, such as those that have been established in the Veterans Affairs polytrauma centers. For this reason, nearly all service members with severe TBI are rapidly transferred from the military healthcare system to a Veterans Affairs polytrauma center. Once brain injury has recovered to the point where the patient can begin learning new tasks and attend therapy training, those with amputation are typically returned to one of the Department of Defense amputee centers of excellence for amputee-specific rehabilitation.

TREATING THE TRAUMA PATIENT'S FAMILY

Initially, it is important that the families of injured service members have access to food, clothing, and shelter. Many spouses of injured service members communicate a sense of hopelessness and helplessness in the face of their loved one's injuries. They worry about lack of information, support, and control in the injured service member's care and rehabilitation. This experience may be very traumatic.³¹⁻³⁴ It is also often difficult for families to absorb the amount of information presented to them from the multiple healthcare providers treating their loved one. Uncertainty within the healthcare team adds to the family members' feelings of anxiety and helplessness.³⁵ Conflicts between family members may cause some members to be unwilling to share information with others, exacerbating the challenges of information exchange. It is difficult to predict how family members will react to the injuries sustained by the service member or to the "trauma" with which they themselves are faced. Helping these families cope with the traumatic event may lessen their chances of developing secondary PTSD.³³ Family members are often better than the medical staff at providing emotional support and reassurance to trauma patients.³²

Preexisting conflicts between family members or between the injured service member and the family may be exaggerated with the added stress of the injury. At times, having a severely injured family member may exacerbate family malfunctioning,³⁵ and the family's built-in support system may need to be augmented with professional help.³³ Effective therapeutic family interventions may not only help family members cope with the traumatic events, but may help the patient as well. Support group therapy sessions can help the families of trauma victims address their needs and feelings.³⁶ Harvey et al found that families were more willing to attend group therapy sessions when the focus was on education and families sharing their stories with one another.³⁶ Families attending these support groups realized that they were not alone and were able to offer support to each other. They were able to share their

EXHIBIT 12-5

CASE STUDY 5: FAMILY INTERVENTION

A 28-year-old male with a right above-the-knee amputation and left below-the-knee amputation was injured in Afghanistan. The patient was flown to Germany, where his wife and mother met him. His wife began having difficulty adjusting to his injury. Problems with her and her in-laws were prominent. The patient's wife and mother frequently argued about what care was appropriate for the patient, causing more stress for the family, service member, and medical staff. The service member's mother was particularly angry that her daughter-in-law of 1 year was taking charge of her son, whom she had raised by herself since he was 5 years old. Upon arrival at Walter Reed Army Medical Center, the family and patient were assessed by the preventive medical psychiatry team and interventions were initiated. The problems were eventually resolved and continued therapy was established upon hospital discharge.

feelings, reduce their anxiety, garner hope, and gain a better understanding of their family member's injuries, medical treatments, and hospital procedures. Many support groups are run by social workers and allow for empathetic sharing and support. Session topics may include issues such as fear, frustration, the need to protect the injured patient, depression, anger, education, coping with disabled spouses, and feelings of alienation and disappointment. The purpose of family intervention is to build up the family's coping skills and resolve symptoms associated with psychological trauma. Further activities, such as sharing meals with other families of trauma patients, may provide the family with additional support.³³ Brief supportive counseling has also proven effective at reducing anxiety in individual family members of trauma victims (Exhibit 12-5).³⁷

FOLLOW-UP

The PMP service continues to support those who need help and attempts to reach out to those screened as inpatients. At discharge, each patient is given a contact number and is encouraged to call the PMP service office if concerns develop. The PMP service at WRAMC calls patients at 30, 90, and 180 days following discharge. If crises occur, patients appear more willing to accept referral recommenda-

tions from behavioral health providers they have known previously or whom they perceive as allies. Additionally, they may find it easier to receive and respond to psychiatric interventions once they have returned home. In general, patients who need treatment upon leaving WRAMC are referred to resources within the military, Veterans Health System, or civilian community.

SUMMARY

The impact of a traumatic event resulting in physical injuries frequently extends beyond the bodily disruptions sustained by the victim to encompass the psychological realm. Although medical trauma teams are designed to respond to physical injuries, equal emphasis needs to be placed on the mental health in-

terventions necessary to assist these victims and their families. The WRAMC PMP service is the first mental health service to see every hospitalized, traumatically injured patient without a formal consult. This approach appears to have reduced the need for emergent psychiatric services in this population.

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