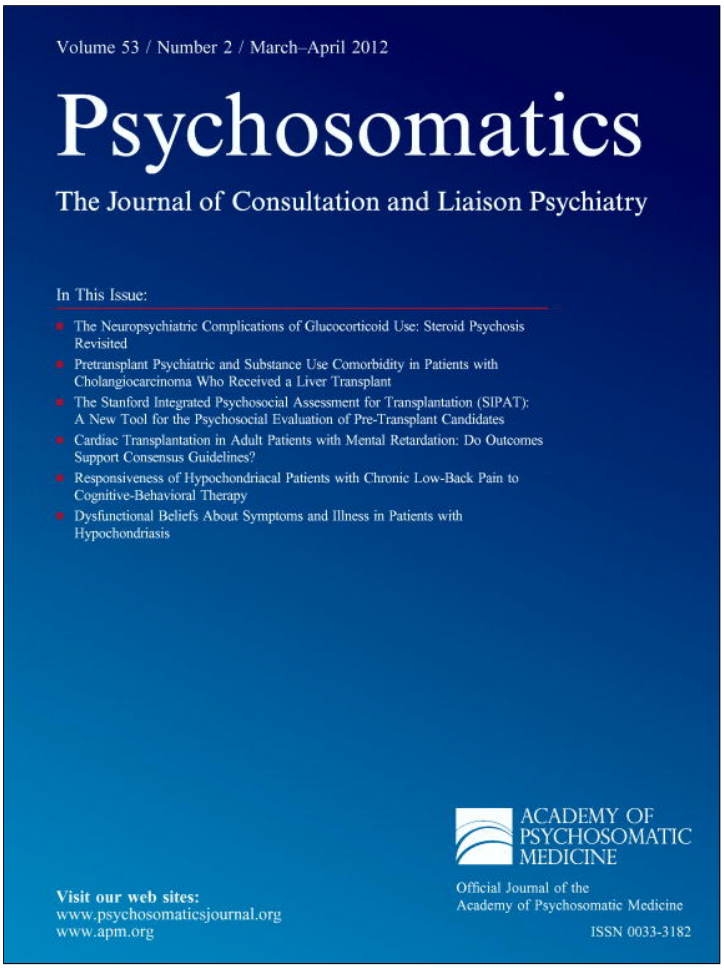

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Letters to the Editor

Tsunami Damage and Its Impact on Mental Health

TO THE EDITOR: The disaster that occurred in the east of Japan on March 11, 2011 (the Great East Japan Earthquake) was unprecedented. It is known that people often experience deterioration in mental health in connection with accidents and disasters. The more severe the experience of trauma, the higher the incidence of post-traumatic stress disorder (PTSD).[1] Thus, the prevention and treatment of mental health problems, including PTSD, was a serious concern after the Great East Japan Earthquake.

Otsuchi Town in Iwate Prefecture was one of the areas most affected by the Great East Japan Earthquake. As of March 22, 2011, out of a total population of approximately 15,000, there were only 6000 confirmed survivors. The tsunami and fires that hit after the earthquake left many people missing and were a major cause of death. Survivors in shelters and others in the area experienced severe trauma as their homes were completely or partially destroyed, and they endured the loss of family and friends.

Toshiro Ueta, a general practitioner in Otsuchi who survived the disaster, had his clinic destroyed by the tsunami. However, soon after he was rescued, he provided free medical consultations to other tsunami survivors. A Nagasaki University medical relief team arrived in Otsuchi on March 16, and joined Dr. Ueta.[2] From March 20 to 22, 2011, of the 200–300 people living in the shelter, 25 persons made use of counseling services and completed mental health assessments (approximately 20 min/person). The 25 included 10 men (average age: 59.7 ± 15.3 years) and 15 women (average age: 62.0 ± 17.3 years). The six-item K6[3] was used to evaluate psychological distress. The K6 is scored from 0 to 24, with a score of 13 or greater categorized as having psychological distress.[3]

As shown in Table 1, the average K6 score of the 25 persons completing assessments was 13.6 (SD = 6.6). This is very high compared with the average score of 3.6 (SD = 3.9) obtained from a general population study[4] of 500 Japanese adults. Furthermore, the incidence of psychological distress in these 25 persons, as determined by the K6, was 48%, which is seven times higher than the rate in the general population.[5] Of the 25 persons assessed, none had experienced the loss of a family member. However, 36% experienced partial, and 64% complete, destruction of their residences. These assessments were performed 10 days after the earthquake, and results indicate that survivors in Otsuchi experienced tremendous psychological distress, which suggests that the disaster had a profound impact on them. During counseling sessions, persons assessed often complained of insomnia and other sleep-related problems. In addition, persons with completely destroyed residences expressed more anxiety regarding the future than persons with only partially destroyed residences.

PTSD is not the only mental health problem caused by disasters. Catastrophic stress also leads to increases in depressive symptoms. It is important to be alert for a wide range of mental health problems, not only PTSD and depression, in survivors of the earthquake and tsunami. In the future, additional support will likely be needed for survivors who present with severe trauma, depressive symptoms, and PTSD symptoms.

TABLE 1. Demographic Data

Variables	Persons Completing Assessments (n = 25)	Reference Value (General Population)	
Age	60.6 ± 15.8 (54.1–67.2)	–	–
Male (%)	40.0 (23.4–59.3)	–	–
K6 score	13.6 ± 6.6 (10.8–16.3)	3.6 ± 3.9	Sakurai et al., 2011
Persons with psychological distress[a] (%)	48.0 (30.0–66.5)	6.7 (6.5–6.9)	Kuriyama et al., 2009
Loss of one or more family members (%)	0 (0–13.4)	–	–
Residence damaged (partially destroyed) (%)	36.0 (20.0–55.5)	–	–
Residence damaged (completely destroyed) (%)	64.0 (44.5–79.8)	–	–
Married (%)	68.0 (48.4–82.8)	–	–
Living alone (%)	16.0 (6.4–34.7)	–	–

Data are expressed as mean ± standard deviation (95% confidence interval).

[a] Persons scoring ≥13 points (out of a total 24 points) on the K6 were defined as experiencing psychological distress.

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Low Voltage Electrical Injury Induces Psychosis

TO THE EDITOR: Psychiatric manifestations commonly emerge and persist following electrical injury (EI). Psychiatric disorders like post-traumatic stress disorder (PTSD), conversion, adjustment disorders, and depression have been reported as a frequent accompaniment of these injuries.[1] We present a case report of a 35-year-old man, with no known psychiatric history of psychotic or affective disorder, who developed psychosis following an electrical injury (220 V).

Case Report

Mr. F, was a 35-year-old man without any systemic disease or psychiatric history, presented with complaints of having suffered an electrical injury of −220 V on May 30, 2011, while repairing an electrical appliance at work. Because of other people's mistakes, he received the electric shock over the right hand for a few seconds. Mr. F became unconscious for several minutes following which he was sent to a hospital by ambulance. At the time of admission, his vitals were maintained, and he was conscious, oriented, ambulatory, and able to micturate normally. There was no vomiting, headache, or other symptoms suggestive of raised intracranial pressure. Around 2 hours later, he became abusive and assaultive to his wife, with acute psychotic symptoms. He was agitated, hostile, guarded, uncooperative, and preaching loudly. He accused his wife of betraying him with another man. Other prominent symptoms included auditory hallucinations, delusions of persecution, and morbid jealousy. He said the doctors were from a different planet sent here to kill him. During the interview, he was unkempt and untidy, and his insight was impaired. He screamed at all of us, and told us we all were going to die. He heard voices commanding him to kill his wife and commenting on his actions. His thought processes were loose and disorganized and there was evidence of thought blocking. Computerized tomography (CT) scan of the brain and electroencephalogram (EEG) examination revealed no remarkable changes. The mental status of Mr. F between the accident and the emergence of psychosis was "stable and normal," the details of which were not available. No obvious abnormal movements were observed in this time. Differential diagnosis included Acute Schizophrenia-like Psychotic Disorder and Delirium. On the basis of Mr. F's history and presenting symptoms, he was diagnosed with Organic Psychotic Disorder Schizophrenia-Like according to ICD-10.[2] At first we started therapy with olanzapine 5 mg/d. Four days later, the dose was increased to 15 mg/d. He began showing improvement within 7 days after admission. The frequency and intensity of the auditory hallucinations were dramatically decreased. He was noted to be cooperative, less anxious and suspicious. After 20 days in the hospital, his mental state returned to normal and his symptoms resolved completely. Mr. F was discharged on the treatment of olanzapine 15 mg/d. Four months later, Mr. F was still symptom-free with the same treatment.

Discussions

Neuropsychological sequelae may start soon after the EI, or there may be a latent period between EI and their onset. We believe that Mr. F's presentation was consistent with 'Organic Psychotic Disorder Schizophrenia-Like'. First, there is a clear temporal relation between the EI and the onset of psychosis. Second, he had no history of psychiatric illness or personality disorder. Third, both the CT scan of Mr. F's brain and EEG were