



Clinical Digest

MENTAL HEALTH

PTSD and Obesity

Several observational studies have reported higher rates of obesity among military veterans with posttraumatic stress disorder (PTSD) than among veterans without PTSD, but the studies have been small and of potentially limited generalizability, according to researchers from Technical University of Dresden, Dresden, Germany; Max Planck Institute of Psychiatry, Munich, Germany; Showa University Fujiganka Hospital, Yokohama, Japan; and University of California, San Diego. To fill the need for a prospective, longitudinal, epidemiologic study focused on traumatic events and PTSD as risk factors for obesity, they analyzed prospective data from the Early Developmental Stages of Psychopathology Study.

In 1995, investigators in that study drew a random sample of 3,021 adolescents and young adults between the ages of 14 and 24 from government registries in Munich, Germany. Over the next 10 years, they assessed the participants four times for 48 mental disorders, as well as traumatic events and subthreshold and threshold PTSD, using the Munich-Composite International Diagnostic Interview (M-CIDI) and the M-CIDI PTSD module. Baseline measurements of weight and height were recorded, and participants self-reported their weight and height at all follow-up points. In 2007, the researchers in the current study evaluated the associations between obesity, traumatic events, and PTSD (as defined in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition).

After excluding 96 participants who were underweight from their

analysis, the researchers found that, by the 10-year follow-up, the cumulative lifetime incidence of obesity was 4% for men and 4.6% for women. Obesity was associated with a lifetime incidence of PTSD—both threshold and subthreshold—among women but not among men. Additionally, there was a significant association between assaultive traumas and obesity among women but not men. No associations between other mental disorders and obesity were found.

The researchers say the mechanism that involves sympathetic activity should be taken into account. Specifically, neuropeptide Y may be a mediator for stress-induced obesity and metabolic syndrome. Animal studies have suggested that, in severe chronic stress, neuropeptide Y is secreted from sympathetic nerve terminals in abdominal white adipose tissue, triggering the proliferation of adipocytes. Results from their study also suggest, the researchers add, that this process might be activated repeatedly among people with PTSD by stress-induced sympathetic arousal in relation to reexperiencing and flashback symptoms.

Source: *Am J Prev Med*. 2009;36(1):1-8.
doi:10.1016/j.amepre.2008.09.026.

NEUROLOGIC DISEASE

Continued Fainting After Pacemaker Implantation

When a patient with a pacemaker has a pattern of fainting, the cause may turn out to be epilepsy. Clinicians from University College Hospital, Galway, Ireland report the case of a 64-year-old man who had a pacemaker implanted after he'd experienced multiple faint-

ing episodes, dizziness, and feelings of "impending doom." After numerous test results were normal, an implantable loop recorder was inserted. With the patient's following syncopal episode, the recorder showed that the event was preceded by a sinus-node arrest lasting 25 seconds. A dual-chamber pacemaker subsequently was implanted.

Although the pacemaker was functioning correctly, the fainting episodes persisted. The patient also had a number of episodes of confusion, which were unrelated to activity and mostly occurred when he was sitting down. Repeat electroencephalography with simultaneous electrocardiography revealed a localized, epileptogenic disturbance in the left anterior temporal region. He was diagnosed with temporal lobe epilepsy (TLE) and treated with oxcarbazepine. He remained asymptomatic at one-year follow-up.

The authors note that ictal bradycardia is a rare manifestation of epileptic seizures and that TLE may induce central or obstructive apneas and is linked with sudden unexpected death in patients with epilepsy. Because TLE may present with feelings of panic and impending doom, palpitations, diaphoresis, dyspnea, and paresthesia, it is easily misinterpreted as an anxiety attack. When an arrhythmia is factored in, the other misdiagnosis is most likely one of primary cardiac disease, treated with cardiac pacing.

Cardiac pacemakers may be indicated in symptomatic ictal bradycardia or asymptomatic bradycardia lasting more than five seconds, the authors say. But they caution that pacemakers have not been proven to reduce the incidence of sudden unexpected death among patients with epilepsy. Physician awareness, patient educa-

tion, and effective seizure control thus remain key.

Source: *N Engl J Med.* 2009;360(1):88–89.

CARDIOVASCULAR DISEASE

Depression in African American Patients with CHD

It has been estimated that up to one of every five patients with coronary heart disease (CHD) has major depression. With the African American population particularly at risk for developing and dying of CHD compared with white and other racial groups, what is the racial disparity of depression and its treatment among African American and white patients with CHD?

Researchers from Duke University, Durham, NC recruited patients with significant CHD from their medical center who were undergoing diagnostic coronary angiography for a larger study designed to evaluate the effects of anxiety on mortality in this patient population. A total of 727 white patients and 137 African American patients were evaluated for depressive symptoms using the Beck Depression Inventory (BDI).

No difference in the prevalence of clinically significant depression (defined as a patient taking antidepressant medication or a BDI score of 10 or greater) was found between the African American patients (40%) and the white patients (38%). An additional 35% of African American patients had elevated depressive symptoms, as did 27% of white patients.

Depression appeared to be undertreated in both groups, the researchers say, but especially in the African American patients: Only 17% of African Americans with BDI scores of 10 or greater were treated with antidepressants, compared with 35.5% of white patients. The difference was particularly evident in men. Only 22%

of moderately to severely depressed African American men were taking antidepressants, compared with 43% of white men.

The researchers say the ethnic differences in psychopharmacologic treatment of depression suggest that more careful assessment of depression, especially in African Americans, is necessary to optimize care of patients with CHD.

Source: *Am Heart J.* 2009;157(1):77–83.
doi:10.1016/j.ahj.2008.08.013.

OCCUPATIONAL HEALTH

Reassessing Radiation-related Cancer Risk

As radiologic interventions multiply, so do concerns about exposure. Because staff using fluoroscopy-guided interventional procedures are at greatest risk for exposure, researchers from Institute of Clinical Physiology and Fondazione Gabriele Monasterio, Pisa and Careggi Health Physics Department, Florence, both in Italy, and San Carlos University Hospital, Madrid, Spain assessed the 2006 levels of staff exposure and corresponding cancer risks in invasive cardiology practices.

They identified all cardiac catheterization laboratory (CCL) staff from a total population of 5,164 workers from more than 50 hospitals and assessed the entire professional exposure for those with an exposure level greater than 2 millisievert (mSv). Of the more than 200 CCL workers identified, 26 had an exposure level above 2 mSv—and 15 of those had worked in the CCL setting for at least 10 years. The median individual effect dose for those 15 was 46 mSv, with those who were older exhibiting greater exposure levels. The median risk of fatal cancer in these 15 workers was one in 384 and the

median risk of fatal or nonfatal cancer was one in 192.

The researchers emphasize that these statistics apply only to the individuals with the highest exposure levels. When the full spectrum of CCL workers was considered, the exposure levels were comparable to those of other specialties with radiation exposure. To put the risk in perspective, the researchers say it compares favorably with such occupations as working in agriculture or mining. The risk of the average interventional cardiologist/radiologist with a maximum 40-year career is below the “less than one fatality per 10,000 workers per year” level that makes for a safe occupation according to the National Council of Radiological Protection.

Although the council considers a CCL worker's occupation as safe, the researchers say the “overall reassuring picture should be integrated with some prudent concern”—that is, lifetime as well as annual and nonfatal as well as fatal cancer risk should be considered. They also urge safety discussions that include the “spectacularly growing” population of highly exposed staff. For highly exposed personnel with 5-mSv yearly exposure, lifetime extra risk for fatal or nonfatal cancer after 20 years of professional life is in the range of one in 100. While that exposure remains well below the dose limit of occupational exposure, the researchers say it can't be considered negligible or harmless. ●

Source: *Am Heart J.* 2009;157(1):118–124.
doi:10.1016/j.ahj.2008.08.009.