

“Functional” and “Organic”: It Is Getting Harder to Tell the Difference

By Eric Hollander, MD

We often consider that psychiatric disorders present with disturbances in thought and emotion, are functional in origin, and do not reflect altered neuropathology. On the other hand, we classically think of neurological disorders as being rooted in altered brain structure, and to present with disturbances of motor function. This month's *CNS Spectrums* suggest that this dichotomy is not always so clear-cut and that the boundaries can sometimes get downright blurry in the real world.

Mario F. Mendez, MD, PhD, and Jill S. Shapira, RN, PhD, describe the spectrum of recurrent thoughts and behaviors that can result from frontotemporal dementia (FTD). Although repetitive behaviors can result from a range of brain disorders, FTD is the most common neurological cause of new-onset recurrent thoughts and behaviors in middle or later life. Patients with FTD can manifest typical or bizarre compulsions, hoarding, verbal and motor stereotypies and complex tics, self-injurious acts, perseverations, and fixed, obsessional thoughts. The frequency and variability of these repetitive behaviors suggest a common disturbance of orbitofrontal-basal ganglia circuits involved in response inhibition. These recurrent events may be ameliorated with the administration of serotonin selective reuptake inhibitors. Was this “functional” compulsive behavior a result of an “organic” frontotemporal dementia? Yes.

Central nervous system (CNS) vasculitis is a rare entity, especially when it occurs in isolation; it is seen more commonly as part of a multisystem vasculitis. Common presenting symptoms include persistent headache, encephalopathy,

and multifocal signs. Carlo G. Carandang, MD, and Allison L. Grant, MSc, discuss the case of a 68-year-old female who presented twice in 1 month with confusion and choreiform movements. Extensive workup was negative for a connective tissue disease or other conditions. The only significant findings were elevated erythrocyte sedimentation rate, inflammatory signs in the CNS, and diffuse slowing of the electroencephalogram. A presumptive diagnosis of isolated angiitis of the CNS was made and the patient was successfully treated with steroids. She recovered fully with no residual symptoms. The diagnosis of isolated angiitis of the CNS is often difficult given there are no definitive laboratory investigations or pathognomonic presentation. However, a series of signs, symptoms, and laboratory findings have been proposed that are helpful in making the diagnosis. Was this “functional” confusion a result of an “organic” vasculitis? Again, Yes.

Susan C. Bolge, PhD, and colleagues identified characteristics of patients diagnosed with unipolar depression by a healthcare provider who may have undiagnosed bipolar disorder identified through Internet-based questionnaires. Of the 1,602 respondents with depression, 14% reported symptoms consistent with a manic episode and were considered at risk for undiagnosed bipolar disorder. These respondents were younger, had a lower socioeconomic status, rated their depression as more severe, and experienced greater impairment of psychological well-being. Greater than 70% of those at risk reported speaking with a healthcare provider about their mania symptoms. Comorbid mental

disorders, especially anxiety-related conditions, were common in these patients. These findings underscore the importance of evaluating unipolar patients for bipolar disorder and may help clinicians identify symptoms and comorbidities associated with patients with unipolar depression at risk for undiagnosed bipolar disorder.

Reduction of core body temperature has been proposed to contribute to the increased lifespan and the anti-aging effects conferred by caloric restriction in mice and higher primates. Cooler biologically compatible core body temperatures have also been hypothesized to combat neurodegenerative disorders. Yet, validation of these hypotheses has been difficult until recently, when it was demonstrated that transgenic mice engineered to have chronic low core body temperature have longer lifespans independent of alteration in diet or caloric restriction. Alen J. Salerian, MD, and Nansen G. Saleri, PhD, review the data and highlight the potential influence of core body temperature's governing role on aging and in the pathophysiology of neurodegenerative disorders in humans.

Human immunodeficiency virus is affecting a growing percentage of the population, and

an increased number of CNS presentations can be expected over the next decade. Emerging data suggests that HIV-seropositive patients and cocaine-abusing patients may be at special risk of seizure phenomena. Christopher A. Kenedi, MD, MPH, and colleagues describe a case and discuss the risks of new-onset seizure activity when these two risk factors converge, which is a common occurrence in this population.

Finally, gender differences may reflect biological and sociocultural factors, and have implications for prevention and treatment strategies. Jon E. Grant, MD, JD, and Marc N. Potenza, MD, PhD, studied 95 adults with kleptomania. Women with kleptomania were more likely to be married, have a later age at shoplifting onset, steal household items, hoard stolen items, have an eating disorder, and were less likely to steal electronic goods and have another impulse-control disorder.

Thus, gender-related differences in clinical features and co-occurring disorders further complicate the "functional" versus "organic" dichotomy and suggest that prevention and treatment strategies incorporate gender considerations as well as knowledge of underlying pathophysiology and brain structure. **CNS**

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