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Editor-in-Chief

Every patient with a brain/mind disorder should receive both neurologic and psychiatric evaluation and treatment

Psychiatry and neurology: Sister neuroscience specialties with different approaches to the brain

Neurologists and psychiatrists diagnose and treat disorders of the brain's hardware and software, respectively. The brain is a physically tangible structure, while its mind is virtual and intangible.

Not surprisingly, neurology and psychiatry have very different approaches to the assessment and treatment of brain and mind disorders. It reminds me of ophthalmology, where some of the faculty focus on the hardware of the eye (cornea, lens, and retina) while others focus on the major function of the eye—vision. Similarly, the mind is the major function of the brain.

Clinical neuroscience represents the shared foundational underpinnings of neurologists and psychiatrists, but their management of brain and mind disorders is understandably quite different, albeit with the same final goal: to repair and restore the structure and function of this divinely complex organ, the command and control center of the human soul and behavior.

In *Table 1 (page 5)*, I compare and contrast the clinical approaches of these 2 sister clinical neuroscience specialties, beyond the shared standard medical templates of history of present illness,

medical history, social history, family history, review of systems, and physical examination.

Despite those many differences in assessing and treating neurologic vs psychiatric disorders of the brain, there is an indisputable fact: Every neurologic disorder is associated with psychiatric manifestations, and every psychiatric illness is associated with neurologic symptoms. The brain is the most complex structure in the universe; its development requires the expression of 50% of the human genome, and its major task is to generate a mind that enables every human being to navigate the biopsychosocial imperatives of life. Any brain lesion, regardless of size and location, will disrupt the integrity of the mind in one way or another, such as speaking, thinking, fantasizing, arguing, understanding, feeling, remembering, plotting, enjoying, socializing, or courting. The bottom line is that every patient with a brain/mind disorder should ideally receive both neurologic and psychiatric evaluation, and the requisite dual interventions as necessary.¹ If the focus is exclusively on either the brain or the mind, clinical and functional outcomes for the patient will be suboptimal.

Neuropsychiatrists and behavioral neurologists represent excellent bridges

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Table 1

Neurology and psychiatry: Differences and similarities

Neurology	Psychiatry
Neurological examination	Mental status examination
A focus on localizing the “lesion” guided by objective signs and symptoms (eg, motor symptoms, sensory symptoms, reflexes, cranial nerves, spinal cord and peripheral symptoms, infections, tumors, degeneration, injury, and pain)	The “lesion” is a widely distributed circuit that is hard to localize and is guided by a mixture of objective and subjective signs and symptoms unrelated to sensory/motor brain functions (eg, speech, mood, affect, thought, suicidal/homicidal impulses, perceptual aberrations, false beliefs, insight, judgment, neurocognition, and social cognition)
Laboratory tests are common and useful in diagnosis of many neurologic diseases	No diagnostic laboratory tests because most psychiatric illnesses are syndromes, not diseases with specific biologies
Impaired level of consciousness may occur	Consciousness usually clear but reality testing is impaired
Several diagnostic and therapeutic procedures	No diagnostic procedures (yet) but some therapeutic neuromodulation procedures (ECT, TMS, VNS)
Seizures are an illness	Seizures are a treatment
Simple genetics, often Mendelian	Complex genetics, numerous risk genes, CNVs, epigenetics, and pleiotropy
Touching the patient is an essential part of the neurologic exam	Touching is often avoided, except to assess EPS, and at one time (during the psychoanalysis era) was taboo
Patients often bedridden	Patients predominantly ambulatory
No stigma, respected by the public, and antineurology movements do not exist	Stigma is (unfortunately) common, mental illness is feared by the public, and antipsychiatry movements have existed for decades
Sympathy and support by family and friends	Fear and avoidance by family and friends
Wheelchair for severe physical disability commonly used	Asylums, the mental equivalent of a wheelchair for severe long-term disability, have been (regrettably) abandoned
Neurologic examination is heavily visual	Psychiatric examination is heavily auditory, but visual observations are helpful
Chronicity is common	Chronicity is common
Focus on physical weakness and pain	Focus on emotional pain and anguish
Full insurance coverage	Limited insurance coverage
Homelessness uncommon	Homelessness common
Substance abuse comorbidity occurs at general population rates	Substance abuse rates as primary and comorbid conditions are higher than the general population
Neuroinflammation and oxidative stress are common mechanisms	Neuroinflammation and oxidative stress are emerging as common mechanisms
White and gray matter pathology common	White and gray matter pathology have been established in several psychiatric disorders
Neurodegeneration common	Neurodegeneration and progression are common
Death is often caused by the brain lesion	Death is often self-inflicted
Patients very motivated to be treated	Patients often avoid or even resist treatment
Forensic issues rare and laws do not interfere with clinical care or major invasive procedures	Forensic issues very common and laws often constrain urgent clinical care, especially procedures such as physical restraints, IM medications for severe psychosis or violence, or neuromodulation procedures such as ECT
Patients are hospitalized voluntarily	Involuntary hospitalization is common

CNVs: copy number variations; ECT: electroconvulsive therapy; EPS: extrapyramidal symptoms; TMS: transcranial magnetic stimulation; VNS: vagus nerve stimulation

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educational partnership
with Saint Louis University



When will the ABPN approve neuropsychiatry and behavioral neurology as subspecialties?

Table 2

Subspecialties of psychiatry and neurology approved by the ABPN

Psychiatry
<ul style="list-style-type: none">• Addiction psychiatry• Child and adolescent psychiatry• Consultation-liaison psychiatry (formerly psychosomatic medicine)• Forensic psychiatry• Geriatric psychiatry
Neurology
<ul style="list-style-type: none">• Brain injury medicine• Clinical neurophysiology• Epilepsy• Neurocritical care• Neuromuscular medicine• Pain medicine• Sleep medicine (available to both psychiatrists and neurologists)• Vascular neurology

ABPN: American Board of Psychiatry and Neurology

across these 2 sister specialties. There are twice as many psychiatrists as neurologists, but very few neuropsychiatrists or behavioral neurologists. The American Board of Psychiatry and Neurology (ABPN) has approved several board certifications for both specialties, and several subspecialties as well (*Table 2*). When will the ABPN approve neuropsychiatry and behavioral neurology as subspecialties, to facilitate the integration of the brain and the mind,² and to bridge the chasm between disorders of the brain and mind?



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