01 - SECTION 1 Diagnosis of Neurologic Disorders

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Approach to the Patient

with Neurologic Disease Neurologic diseases are common and costly. According to estimates by the World Health Organization, neurologic disorders affect nearly one in three individuals and represent the leading cause of disability and the second leading cause of death worldwide (Fig. 433-1). These numbers have increased significantly over the past 30 years and are expected to double by 2050, due to multiple factors, including aging of the population, population growth, and a rising prevalence of meta bolic risk conditions. Motor neuron diseases | 0.3% Multiple sclerosis | 0.4% Tetanus | 0.9% Parkinson’s disease | 1.2% Other neurologic disorders | 1.3% Encephalitis | 2.4% Tension-type headache | 2.6% Brain and other CNS cancer | 2.8% Traumatic brain injury | 2.9% Spinal cord injury | 3.5% Idiopathic epilepsy | 4.9% Meningitis | 7.9% Alzheimer’s disease and other dementias | 10.4% Migraine | 16.3% Stroke | 42.2% DALYs FIGURE 433-1 Proportional contributions to the overall global burden of neurologic disorders. Proportions (%) of disability-adjusted life-years (DALYs) and deaths. (Based on data from GBD 2016 Neurology Collaborators: Lancet Neurol 18:459, 2019.)

Neurologic Disorders PART 13 Because therapies now exist for many neurologic disorders, a skillful approach to diagnosis is essential. Errors commonly result from an over reliance on costly neuroimaging procedures and laboratory tests, which, while useful, do not substitute for an adequate history and examination. The proper approach begins with the patient and focuses the clinical problem, first in anatomic and then in pathophysiologic terms; only then should a specific neurologic diagnosis be entertained. This method ensures that technology is judiciously applied, a correct diagnosis is established in an efficient manner, and treatment is promptly initiated. THE NEUROLOGIC METHOD ■ ■DEFINE THE ANATOMY The first priority is to identify the region of the nervous system that is likely to be responsible for the symptoms. Can the disorder be mapped to one specific location, is it multifocal, or is a diffuse process present? Are the symptoms restricted to

the nervous system, or do they arise in the context of a systemic illness? Is the problem in the central nervous system (CNS), the peripheral nervous system (PNS), or both? In the CNS, is the cerebral cortex, basal ganglia, brainstem, cerebellum, or spinal cord responsible? Are the pain-sensitive meninges involved? In the PNS, could the disorder be located in peripheral nerves and, if Multiple sclerosis | 0.2% Motor neuron diseases | 0.4% Tetanus | 0.4% Other neurologic disorders | 0.6% Encephalitis | 1.1% Idiopathic epilepsy | 1.4% Parkinson’s disease | 2.3% Brain and other CNS cancer | 2.5% Meningitis | 3.5% Alzheimer’s disease and other dementias | 26.4% Stroke | 61.2% Deaths

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