Infections of the Nervous System, 4th ed.


In recent years, there have been major advancements in management of infectious diseases; however, infections that affect the central nervous system (CNS) remain a significant challenge. They are often difficult to diagnose and treat, resulting in prolonged hospitalization and high morbidity and mortality rates. With modern-day travel, outbreaks of infections can rapidly transcend the globe. Not surprisingly, several recent movies, novels, and nonfiction books have been based on encephalitis, and outbreaks have received wide attention by the popular media.

The book is has 51 chapters, which are organized thematically into 10 parts and presented in >900 pages. It is an exhaustive and authoritative clinical review that is written for the practicing and academic clinician. The first part has chapters on how to approach patients with suspected CNS infections, cerebrospinal fluid (CSF) findings, and neuroradiological changes. It also has broad chapters on meningitis and encephalitis. Forty of the 51 chapters are divided by organism and cover all viruses, bacteria, spirochetes, fungi, parasites, and prions. The book also has chapters on undiagnosed and noninfectious chronic meningitis, surgical and critical care management of CNS infections, and vaccines that are relevant to these infections. This combination of a syndromic approach to the diagnosis and management of CNS infections and division of chapters by microorganisms is a unique aspect of this book. Each chapter is divided into several sections that include the epidemiology or provide a historical perspective of the infection, a brief description about the organism, clinical features, diagnosis, and management. Each of these sections has multiple subheadings, making it easy to find and focus on areas of interest to the reader. Most chapters have multiple color illustrations, as well as photomicrographs showing the pathology or neuroradiological findings. Where appropriate, tables, figures, and algorithms for management have been included.

Each chapter has been written by leaders in the field, and this expertise is clearly reflected in the detail and the clinical perspective provided in each of the chapters. For example, the chapter on poliomyelitis includes a magnetic resonance imaging (MRI) scan and pathological findings, which are probably very hard to obtain as the disease is so rare these days. In the part on viral pathogens and related disorders, the chapters on herpes viruses, rabies, and prion diseases are particularly noteworthy. They are very exhaustive with multiple illustrations describing the pathophysiology, MRI and pathological findings, and approach to treatment. The chapter on encephalitis provides a very detailed approach on how to establish an etiological diagnosis in these patients and covers all aspects of unique clinical manifestations, laboratory findings, MRI findings, and pathogen isolation, comparing each of these aspects in a set of several large tables. The chapter on bacterial meningitis is extensive in scope, nearly 55 pages in length. It covers usual and unusual organisms. The diagnostic utility and interpretation of CSF findings in circumstances such as a traumatic tap or partially treated meningitis is particularly useful and so is the discussion and recommendations for adjunctive therapy and use of corticosteroids. The chapter on neurosyphilis provides excellent algorithms for diagnosis in human immunodeficiency virus–infected and uninfected subjects. Several excellent chapters have been devoted to tropical infections such as cerebral malaria, cysteercrosis and other parasitic infections, tuberculosis, tick-borne diseases, trypanosomiasis, and others.

Overall, the book is very well written and an important resource for all clinicians who work with patients who may develop any kind of CNS infection.

Note

Potential conflict of interest. Author certifies no potential conflicts of interest.

The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Avindra Nath
Section of Infections of the Nervous System, National Institute of Neurological Diseases and Stroke, National Institutes of Health, Bethesda, Maryland