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978-1-107-01455-8 - Neurologic Differential Diagnosis: A Case-Based Approach

Edited by Alan B. Ettinger and Deborah M. Weisbrot

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Neurologic Differential Diagnosis

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This book is dedicated to our sons, Joshua and Jonathan Ettinger, with love. They have been our greatest teachers along the journey of life.

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Foreword

There is an apocryphal story of an eminent neurology professor who was asked to provide a differential diagnosis. He allegedly quipped: “I can’t give you a differential diagnosis. If you wish I will give you a list of wrong diagnoses followed by the right diagnosis.” Sadly, this sort of arrogance pervaded our field, particularly in the era before there were accurate diagnostic methods and effective treatments of neurological diseases. Fortunately, this sort of pomposity is now relegated to the past and remains only as an antique reminder of a type of hubris that precluded discovery and progress in diseases of the nervous system.

Fortunately, the era of therapeutic nihilism in neurology is over, but now we are faced with a different problem. There is simply too much information for any one person to accommodate. In the twentieth century, internal medicine responded to this explosion of knowledge by differentiating itself into an array of subspecialties, such as cardiology, endocrinology, nephrology, hematology, oncology, gastroenterology, infectious diseases, pulmonology, and many more. The internist of the 1950s took care of patients with cardiological and hematological problems. In the year 2000, no one can imagine a hematologist performing a cardiac catheterization or a nephrologist managing hepatitis C. Similarly, in the twenty-first century neurology now is a group of fields, such as stroke, movement disorders, epilepsy, cancer neurology, neuromuscular disease, headache, multiple sclerosis, cognitive and behavioral neurology, neuroophthalmology and many more. Just as, in internal medicine, the Parkinson’s disease expert cannot be expected to undertake the treatment of brain tumors or complex epilepsy.

But because of the changes in the way medical care is delivered, neurology, as internal medicine, has experienced a renaissance of the generalist in the form of divisions of general and hospital neurology. After all, someone must decode the non-specific neurological complaint, such as dizziness, headache, and confusion, and determine the nature of the problem so the

evaluation and treatment can be undertaken in an effective and efficient manner. Obtaining an unfocused array of neurodiagnostic tests is not only inordinately expensive, but it is potentially dangerous, as it may disclose an incidentaloma, the irrelevant finding on a blood test or image that can lead to unnecessary and even life-threatening interventions. Also the availability of an enormous amount of medical information to the lay public, some of which is useful but most of which is misleading and often terrifying for the patient, greatly complicates the care of patients who may come to the doctor with a strongly held theory of their own problem.

It was in this context that Alan Ettinger and Deborah Weisbrot conceived of the idea of a practical, easily accessible source for the clinician to generate a rapid differential diagnosis when faced with the most common neurological complaints. This is a bold and ambitious endeavor as the number of such complaints is enormous. Entire textbooks have been written about virtually all of the major subjects and a huge literature lurks in the background for every problem. Rather than try to create simply another textbook, Drs Ettinger and Weisbrot have disciplined their large array of authors to follow a strict format. For each chapter, there is a brief description of the symptom, sign, or condition, followed by a summary of the relevant anatomy, physiology, and pathophysiology. The heart of each chapter is a differential diagnosis table, which is consistent throughout the book. For each item, the differential diagnosis is divided by the basic nature of the problem, followed by specific types, etiologies, and clinical features. For example, for the dilated pupil, the several major categories of the table are toxic, pressure, degenerative, vascular, traumatic, inflammatory, ictal, and congenital. For toxic types, anticholinergic and adrenergic are listed as the subtypes. For anticholinergic, scopolamine, cosmetics, glaucoma treatments are listed as etiologies and for scopolamine, special clinical features such as

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accidental instillation into the eye of an agent being used for the prevention of motion sickness. Following the table, there is an illustrative clinical vignette. For the dilated pupil, a case of a male who was using scopolamine to prevent sea sickness is recounted.

Using this stereotyped method the reader can know exactly how to look up a particular symptom (e.g. dizziness) or sign (e.g. the dilated pupil) and quickly obtain a reasonable differential diagnosis which will aid in ordering studies, starting treatment, and referring to the appropriate specialist. The book will be valuable to multiple different types of readers depending on their specific needs and level of sophistication. The student will use the book to begin to understand the assessment of the patient with a neurological complaint. The non-neurologist, including other specialists and physician extenders, will be aided in

approaching such patients and referring those who need it to the appropriate specialist. The general neurologist will use it to refresh memory of the many different subspecialties of the field and the subspecialist will find it invaluable to deal with problems outside their area of special competence. Those taking certifying examinations can use it as a study guide for the major neurological problems faced in the practice of medicine, whether it be in the office, the hospital, or the emergency department.

Ettinger and Weisbrot's *Neurologic Differential Diagnosis: A Case-Based Approach* is likely to become a must-have for any doctor or other healthcare provider who must assess neurologic symptoms and signs, and that is just about everyone.

Martin A. Samuels, M.D.

Preface

There is certainly no paucity of general and specialty neurology textbooks, so why produce yet another one? This book was inspired by our experiences as neurology and psychiatry residents many years ago, and has been reinforced decades later as senior clinicians. Nowadays, in the era of managed care, clinicians are expected to see increasing numbers of patients in shorter amounts of time; how can the clinician ensure that important diagnoses are not missed?

It seems to us that it is unlikely that the busy neurologist or neurology resident will have the time or inclination to pore through voluminous textbooks in the office or emergency room, looking for clarification of differential diagnosis. A smaller collection of textbooks specifically devoted to differential diagnosis is available; however, many of these are essentially bare-bone lists of diagnoses while others seem too basic or superficial.

What we seek to provide in *Neurologic Differential Diagnosis: A Case-Based Approach*, is a highly accessible and pragmatic guide to the vast array of potential etiologies for neurologic and psychiatric symptoms. Clinicians can readily find, in the alphabetized arrangement of topics, immediate references that remind the clinician of items to check for when faced with complaints of “dizziness,” “mental status change,” “diplopia,” or “psychosis.” Instead of simple lists of potentially responsible causes for symptoms, each diagnostic possibility is linked to reminders of key elements that will help the clinician decide whether the

specific patient’s presentation fits with each possible etiology. In addition, each chapter includes case studies that exemplify a systematic approach to differential diagnosis of each symptom.

Who will find the book useful? Both experienced and junior neurologists should find the content written by the expert authors to be invaluable. The non-neurologist such as the internist or general or family practitioner, emergency room physician, physician assistant, and nurse practitioner who finds the subject of neurology to be esoteric and difficult to conceptualize, will find the organized tables in each chapter to be readily comprehensible. Many chapters are devoted to psychiatric symptoms and will find good use in the hands of the psychiatrist performing the essential task of ruling out compelling medical diagnoses presenting as psychiatric conditions. Neurologists and psychiatrists preparing for their board examinations will also find *Neurologic Differential Diagnosis* to be invaluable, particularly because of the inclusion of case examples and the discussion of the organized approach to diagnosing each symptom.

As academic clinicians teaching residents in neurology and psychiatry, we have had the opportunity to pilot the use of numerous chapters as teaching guides for physicians-in-training. We have been very gratified by the enthusiastic and positive feedback that we have received from our student physicians as well as our colleagues. We sincerely hope that this book will find an important place on the shelves of clinicians everywhere.

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Finally, we thank our patients, who shared their lives and struggles with us and taught us the true value of patiently taking a thorough history when generating the differential diagnosis.

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