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Dieter Schmidt , Steven Schachter  
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## Case-based Learning

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*We dedicate this book to the memories of Théodore Herpin,  
Norman Geschwind, and Dieter Janz  
– three masters of case vignettes.*

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## Preface

Why did we write a book about pitfalls in the management of epilepsy? The easiest answer is that we encountered these pitfalls the hard way – by falling into these many traps. Doctors learn from mistakes, probably because they become emotionally charged, and the “practice” of medicine implies constant improvement from experience. So we strove to better understand the pitfalls of epilepsy management to help us and others avoid them and to ensure that patients receive the best possible care.

In keeping with the format of the pitfalls series of books, we present case vignettes to illustrate many common pitfalls in epilepsy diagnosis and management, and in doing so we honor the legacies of pioneers who used case vignettes effectively to advance knowledge and teach the following generations. We have dedicated this book to three of the most prominent giants of case studies: Théodore Herpin, who included a series of over 30 vignettes of his patients with treatment-refractory epilepsy which he called rebellious cases (Herpin, 1852); Norman Geschwind, who used case studies to explore the interictal personality of patients with epilepsy (Schachter, 1997); and Dieter Janz, who based a full monograph on the epilepsies on detailed case histories of 250 of his patients (Janz, 1969).

Many of the early observations of patients with seizures continue to remain valid at the present time. As sophistication and refinement in the medical and surgical management of epilepsy grew, academicians sought evidence-based guidance for treatment from randomized controlled trials providing class 1 information. Yet we take care of patients one at a time and the anecdotal evidence from a single patient often shapes our training and later experience as we mature into proficient clinicians. In addition, it is “the one” patient with a rare disease, or the atypical presentation of a common disease such as epilepsy, where we learn about the full spectrum of signs and symptoms. It is the breadth of discovering heterogeneity that accrues over a lifetime to make one a “seizure doctor.” While it is certainly true that single patient case histories are unable to provide definitive scientific evidence, they are able to help generate interesting hypotheses that further our understanding of a specific condition. In epilepsy, the number of conditions is legion, and the number of etiologies immense. There are few disorders that compare with the unpredictability of seizures in a seemingly healthy individual. Therefore, with respect to understanding the impact and mechanisms of disease, case reports are critical to shape the role we play in guiding personalized medical care in the treatment of people with recurrent seizures.

When we train during residency and fellowship, the Socratic method of learning often lies at the foundation of our experience. During hospital rounds we encounter individual patients and learn “at the bedside” from our mentors. Questions that arise and information that is discussed are the contents for this book. Additionally, it is hoped that it will aid the clinician’s judgment when encountering similar case situations. While there are multiple textbooks, monographs, and journals that offer a scientific fund of knowledge necessary for understanding a medical condition, it is the individual human encounter that transforms our experiences into expertise in a way that is impossible for didactic teaching alone to convey.

## Preface

When a particular patient's chief complaint or condition evades our understanding, it is important to realize that others may immediately recognize what we do not. Sir William Osler, dubbed the "Father of Modern Medicine," was famous for his diagnostic acumen, his broad knowledge, and his prodigious publishing output; yet he would often surprise and impress his students by using his own clinical mistakes as teaching examples

(<https://profiles.nlm.nih.gov/ps/retrieve/Narrative/GF/p-nid/363>).

In "Common Pitfalls in Epilepsy," we attempt to take a fresh approach to case-based learning by providing dialogue about where traps leading to misdiagnosis and mistreatment may occur. Actual case histories have been taken from patients in the United States and Europe and are presented with a series of questions and answers that revolve around important diagnostic and treatment topics. The format is designed as though we are "rounding" on patients with epilepsy within a group of clinicians who seek to specialize in the field of neurology or epileptology. Critical situations may arise that challenge even the most seasoned clinicians. Our goal in this book is to take a problem-based learning approach. We focus on common topics and individual case situations where clinicians are likely to be pulled into a wrong conclusion; a wrong conclusion that could potentially harm the patient—a pitfall to avoid.

As we remember "To Err is Human," it is equally important to recognize that we may have difficulty dissecting the information provided by patients because of the very nature of seizures. Rather than abandon the medical history, though, the insights that can be derived from the patient's history will often outweigh the cumulative value of "tests". The results of tests have their own pitfalls when an accurate history and physical examination is abbreviated or curtailed unnecessarily. From the time of a first seizure to the state of drug-resistant epilepsy, many medical and nonmedical issues arise for the individual patient that require interventions. From antiepileptic drugs, to diets and supplements, to neurostimulation and epilepsy surgery, there are countless areas where crucial information may change the life of a person with epilepsy forever. For neurologists, neurosurgeons, psychiatrists, internists, therapists, and technologists, this book provides a grassroots approach to dealing with common problems that are encountered in people with seizures.

In the forthcoming chapters of this book, we seek to enhance the reader's knowledge by asking questions about seizures and epilepsy that they might ask their mentors or consultants. In the dynamic and often dramatic situations that arise in dealing with patients who have epilepsy, many questions arise. Our hope is to provide information that will be relevant to the patient with epilepsy in different situations by providing an approach that will enhance teachable moments and the resulting treatment outcomes. While the teacher–student relationship is emphasized in the text for the purposes of learning more about the pitfalls in epilepsy, the reverse is also true: we learn from our patients every day.

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## Acknowledgments

Why is what we do called medical practice? It is because we learn by doing and by seeing the consequences of our actions and inactions in our quest to help our patients and *primum non nocere* – first do no harm. Indeed, this book could not have been written if we did not first acknowledge that we had encountered common pitfalls, large and small, in the management of patients with epilepsy and that second these pitfalls can be avoided successfully by sharing experiences. We have come to view these pitfalls as gifts, as long as they are humbly recognized as opportunities to improve patient care. We therefore pass along to the readers of this book the gifts of many generous colleagues and patients who kindly shared their untoward experiences with us. The authors want to thank in particular Professor Christian Erich Elger from the University Epilepsy Clinic, Bonn, Germany, Doctor Greg Cascino from Mayo Clinic, Rochester Minnesota, and Doctor Donald Schomer from Beth Israel Deaconess Medical Center, Boston, Massachusetts, all those who gave us permission to include their work, and our families for their unwavering support.

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