PROLOGUE

This book focuses on the diagnostic contribution of the EEG in people with epilepsy and those referred with the suspicion of it. Therefore, it covers the indications and the optimal use of the EEG from the initial diagnostic level of "does my patient have epilepsy and, if yes, what is its type?" to the highest diagnostic refinement at the level of the particular epilepsy syndrome, common or rare. The overall effort was driven by the belief that good clinical epileptology requires satisfactory knowledge of the EEG. This dual approach must always be balanced and flexible with good understanding of what the EEG can (or cannot) do for the diagnosis of the *given* patient. An educated feeling about it may be variably acquired with time and practice, but clinical opinion must always be based on solid EEG evidence.

The material is organised in two parts. The first part discusses the clinical approach of the patient presenting with the main behavioural patterns of epileptic seizure, the respective diagnostic challenges and the use of the EEG to support and refine, or reject, the initial hypothesis. The next three chapters explore the "when" and "how" to use the EEG, once the commonest imitators of epilepsy enter the differential diagnosis. In this common and sometimes notoriously difficult to unravel scenario, good indications for the (often overused) EEG are found in the history of the *individual* patient; hence, the relevant clinical information is also included. Finally, a section discussing the EEG paroxysms of uncertain significance was also deemed necessary, not least as a further assistance to EEG interpretation when these paroxysms are the main (or the sole) EEG abnormality and the clinical picture offers little diagnostic certainty. The second part was published on its own in 2018 and covers the epilepsy syndromes that are recognised by the ILAE from the neonatal period to adulthood. The rationale and structure of this section are described in page 81. I re-edited this section, corrected some oversights of the previous edition and added operational links to the first part where needed, preserving the content and coherence of the original syndrome-chapters.

Bibliography is limited to a few important recent and best accessible references, but also includes seminal papers irrespective of their publication date. Abbreviations have been sparingly used to ensure smooth uninterrupted reading. The catalogue on page XI contains the commonest; chapter-specific terms are fully given when they first appear in the respective section and in abbreviated form thereafter.

The training of the neurology and the clinical neurophysiology residents in EEG and epileptology was a major motivation. For the former, it varies widely from country to country, from adequate to negligible; for the latter, it can be skewed towards electromyography. This incentive may partly explain the narrative and the abundance of clinical information, for instance when differential diagnosis is discussed. The chapters on the diagnosis of epileptic seizures and their differentiation from their imitators may also come in useful for those who are usually the first to see patients with a "first seizure" or possible new epilepsy: the general practitioner, the physicians at the emergency department and their residents and (to some extent) the general neurologist. The second part is of particular interest for the paediatric and adult epilepsy specialists, but not only. It is also expected to benefit the EEG technologists who wish to improve their knowledge in epileptology and their recording strategy and expertise. After all, the clinical usefulness of the EEG report depends heavily on the competence and strength of the actual recording.

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It is very much hoped that this book becomes a useful (and enjoyable) educational and clinical tool for all professionals who care for people with epilepsy and are interested in EEG, within and outside tertiary epilepsy centres.

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