Functional Electromyography
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Provocative Maneuvers in Electrodiagnosis
To our steadfast families

*All that is constant is change.*
  – Ancient Chinese proverb

*Love is not love that alters where it alteration finds.*
  – William Shakespeare
This book provides operational definitions for three commonly encountered medical conditions that currently lack precise criteria. It accomplishes this task by introducing common sense methods for measuring positional changes in electrophysiological metrics.

The authors make an effort to convince the reader of the practical, theoretical and historical fittingness of these further extensions of the physical examination, through anatomical analysis and empirical means, using imaging techniques and series of patients diagnosed and treated according to the methods proposed here.

The book’s third and final aim is to suggest guidelines for the electromyographer who wishes to apply these new techniques to novel, and perhaps less frequently seen situations in clinical medicine.
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Preface

In the course of electrodiagnostic examinations over what is, taken together, more than 30 years of practice, we have noticed changes in what were ostensibly immutable parameters. An individual’s nerve conduction velocities or occasionally absolute or interpeak latencies in somatosensory-evoked potentials seemed at times to vary with position. Over the past 10 years, we have tried to study these inconsistencies and to link these changes with their probable cause. In this book we present three of them very much the way we encountered them: in the course of clinical work, as extensions of the physical examination.

Our coming across these phenomena is, in a small way, parallel to what has happened in electromyography, and what may happen in science in general. Periods of confusion and disorder were followed by consolidation, standardization, and the drive to achieve a consensus in conceptual approach as well as methods and results. An unorganized, chaotic era of independent inquiry leads, inexorably, toward a unified theory, much as a cooling planet is thrown off to circle a molten sun. Then the subject, in our case electrodiagnosis, like a new planet, gets solid, as it were, and soon able to support practical activity, much as a stable world enables animated processes such as life itself. And following this, in the science as well as a new world, a second era of disorganized, exploratory activity begins.

In this book, we have taken advantage of the broadly accepted and largely stable metrics and parameters of electrodiagnosis in order to present a reasonably novel measure of a type of neuropathology. We have used a method based on unchanging techniques to record and interpret exactly the opposite: to document changes. We hope that if these observations are borne out by future work, then the methods described here will eventually join the expanding body of reliable tools of the clinical electromyographer.
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