Autoimmune Encephalitis and Related Disorders of the Nervous System

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The spectrum of conditions covered by the term "autoimmune encephalitis" has expanded dramatically over the past decades. This explosion in antigenic targets has been paralleled by improvements in treatment, which have transformed the outlook of many patients diagnosed with the condition. It is telling that the past outlook for patients with autoantibody-mediated encephalitis was frequently bleak, with good outcomes in only 6% of autoimmune encephalitis cases amongst a historical cohort of patients with encephalitis.[1] Fortunately, the outlook for patients with autoimmune encephalitis has improved beyond all recognition since then. The foundational role that the authors have played in many of these conditions and therapeutic breakthroughs provides a unique perspective on this field.

"Autoimmune Encephalitis and Related Disorders of the Nervous System" provides an impressively comprehensive coverage of the entire spectrum of autoimmune encephalitides and associated immune-driven disorders of – predominantly – the central nervous system. The initial section provides a very effective overview of these conditions, covering the historical context of their discovery, how best to recognise autoimmune encephalitis clinically and an approach to immune mechanisms causing autoimmune encephalitis. The second section delves more deeply into these immunological mechanisms and the effect of autoantibodies on the nervous system. The third section then catalogues each of the autoimmune encephalitides and related diseases in encyclopaedic detail, in each case covering clinical features, diagnostic investigations and treatment. The final section details the more controversial end of the autoimmune encephalitis-associated spectrum, including the intersection between neurological and psychiatric manifestations. This text is vividly brought to life by both insightful clinical vignettes and high-quality images interspersed throughout.

This book will undoubtedly claim a prominent position on the bookcase of any clinician or researcher with a specialist interest in neuroimmunology. The sheer amount of detail and comprehensiveness of the literature cited may be daunting to the typical general neurologist, who may be better served by consulting briefer review articles with a more clinical focus (*e.g.* ref. 2). Similarly, with the exception of those members of the public with a strong grasp of immunology and neuroscience, this book is unlikely to be an accessible entry point into autoimmune encephalitis research.

A key strength of this book is that the authors have been pivotal to the discovery and subsequent study of the core conditions. The writing is therefore assured and scholarly, demonstrating the expected mastery of the literature covering autoimmune encephalitis. At the time of publication, most of the references cited are up-to-date. The structure of the book is logical and lends itself both to reading up on a particular area of interest and reading from cover to cover.

The only minimal limitations of this text stem from the authors' many years of experience in this field. There is occasionally a tendency to downplay uncertainty in some areas of autoimmune encephalitis research. Similarly, the preface describes how the field of autoimmune encephalitis has reached maturity with definition of the most important concepts already completed. Although this is possible, history shows us that the state of research is almost always less complete than classical dogma acknowledges. This view is often superseded by paradigm shifts driven by improved technologies or underappreciated concepts. Current advances in single cell sequencing and spatial proteomics offer high-resolution insights that show vast promise in revolutionising our understanding of immunological mechanisms underlying these conditions. To use the authors' own metaphor, although the knowledge detailed in this book does have the potential to act as Virgil to the patient's Dante and guide the journey from darkness, the journey is not fully complete until all patients can ascend from the darkness of autoimmune encephalitis into the light of full recovery. These future journeys are likely to require additional discoveries that have not yet been conceived.

Overall, this book represents an essential, comprehensive overview of autoimmune encephalitis and related disorders, which will be required reading for future generations of neurologists specialising in neuroimmunology and neuroimmunology researchers. Any neurologist running a subspecialty neuroimmunology clinic would be well advised to have a copy of this book in their clinic room. Although the foundations of autoimmune encephalitis research are firmly established by this text, there is plenty of space to build further upon this, which should be a source of immense optimism for patients with autoimmune encephalitis, their families and friends.

References

1. Granerod, J.*, et al.* Causes of encephalitis and differences in their clinical presentations in England: a multicentre, population-based prospective study. *The Lancet Infectious Diseases* **10**, 835-844 (2010).
2. Abboud, H.*, et al.* Autoimmune encephalitis: proposed best practice recommendations for diagnosis and acute management. *J Neurol Neurosurg Psychiatry* **92**, 757-768 (2021).