

Neuropsychiatric Symptoms of Neurological Disease

Series editor

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Health care professionals are starting to realize the importance of managing neuropsychiatric complications in neurological disease, they disturb the process of care and are indicators of poor outcome, they also produce significant caregiver burden. This series will describe neuropsychiatric symptoms of major neurological diseases including new drugs (new anti-psychotics, mood stabilizers, antidepressants, cholinergic agents) that are available and other interventions for the management of these complications. This series will be targeted at neurologists, geriatricians, psychiatrists, internists, hospitalists, intensive care MDs, psychologists and neuropsychologists, research and specialised nurses, clinical researchers and methodologists. Each volume will provide an up to date comprehensive review of the neuropsychiatry of major neurological diseases by active authorities in the field internationally. Emphasis will be placed on the diagnostic and management issues to serve as a standard reference book for clinicians of several specialities. Volumes will feature:- Critical appraisal of the methodological aspects and limitations of current research including ongoing controversies in the field.- Focus on the pharmacological aspects of management to provide robust information on drug dosages, side effects and interaction.

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Marco Mula
Editor

Neuropsychiatric Symptoms of Epilepsy

 Springer

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Preface

Epilepsy is a neurological condition that knows no geographic, social, or racial boundaries, occurring in men and women, affecting all ages, though more frequently affecting young people in the first two decades of life and people over the age of 60 years. It has been estimated that worldwide there are at least 50 million people who have epilepsy and more than 80 % of people with epilepsy live in developing countries where the condition remains largely untreated. These people could live normal lives if properly treated, but the majority of them do not receive any effective treatment. Most importantly, epilepsy is now recognized as a disorder of the brain characterized not only by an enduring predisposition to generate epileptic seizures but explicitly also by the neurobiological, cognitive, psychological, and social consequences of this condition, and for this reason, although seizure freedom is of course still the goal where possible, “More than seizures” was the theme for the European Epilepsy Day in 2014. Psychiatric disorders are relatively frequent comorbidities in epilepsy, with a lifetime history identified in one of every three patients, but these problems are, more often than not, ignored, unless they are severe enough to cause major disability. This seems to be due to multiple factors, including the patients’ reluctance to volunteer spontaneously information about existing psychiatric symptoms, a paucity (or total lack) of a specific training of the treating neurologist to recognize these psychiatric comorbidities, and a lack of time in very busy clinics to screen for them. Nonetheless, psychiatric problems in epilepsy have a deleterious impact on quality of life, morbidity, and mortality.

Traditionally, among all different neurological subspecialties, epileptologists have been deeply involved in the understanding of human behavior, and epilepsy has been historically considered a privileged window into the complex world of human emotions. The rapid expansion of neurosciences, during the twentieth century, forced the separation between neurology and psychiatry, but such findings and progresses in reality made the boundaries between neurology and psychiatry even more indistinct with a progressive need for transdisciplinary integration. In fact, the use of “neurological” techniques (e.g., neurophysiology and neuroimaging) in psychiatry, and the careful observation of psychopathological states and behavioral

symptoms in patients with neurological disorders, enriched the neuroscientific literature with new data, shedding light on the neurobiology of human behavior.

It is now becoming evident that epilepsy, more than other neurological disorders, needs to be approached by a multidisciplinary team with multiple skills and different specialists. The need for a multidisciplinary approach obviously requires that the different health professionals speak the same language and are aware of problems and diagnostic and therapeutic options. The aim of this book is to give an up-to-date review of psychiatric problems in epilepsy with special attention to clinical aspects. I'm very grateful to all colleagues that contributed so enthusiastically to this project, sharing their tremendous expertise. This is a book written by clinicians for clinicians, bearing in mind the contribution of basic science to the understanding of human behavior.

London, UK

Marco Mula, MD, PhD

Foreword I

Neuropsychiatric Symptoms of Epilepsy addresses a highly relevant topic which impacts on the life of many people with epilepsy and their families and requires constant consideration by all professionals involved in epilepsy care as well as scientists engaged in research on the mechanisms of the epilepsies and the search for new treatments.

Psychiatric comorbidities occur overall in about one-third of people with epilepsy during lifetime, and their incidence is much greater in high-risk groups such as individuals with seizures resistant to treatment. These comorbidities exhibit a variety of clinical manifestations, prognostic features, and pathophysiological mechanisms – accordingly, they require diversified management strategies. Psychiatric disorders, particularly mood disorders, have been repeatedly found to adversely affect quality of life of people with epilepsy to a greater extent compared with seizures themselves. Yet, not uncommonly, these disorders are underdiagnosed, and their clinical importance is often underestimated, particularly by primary care physicians but also by neurologists.

Marco Mula deserves praise for assembling a team of internationally recognized experts and producing a publication which, for its peculiarities, fills a gap in the epilepsy literature. *Neuropsychiatric Symptoms of Epilepsy* provides a comprehensive, analytical, up-to-date review of the wide range of psychiatric disorders that can occur in people with epilepsy and of the complex and at times bidirectional relationships between these disorders, the underlying causes of epilepsy, the effects of seizures themselves, and the role of pharmacological and surgical treatments. Throughout the chapters, emphasis is placed on those aspects which are most relevant for clinical management – from the value and indications of screening instruments to the challenges with differential diagnosis and from the rational approach to prevention and treatment to extensive discussion of potential benefits, limitations, and risks associated with available therapeutic options. The inclusion of authors with long-standing experience in the care of people with epilepsy and psychiatric disorders provides a clinically oriented perspective which is a special asset of this book. Appropriate emphasis is made on limitations of current tools, gaps in knowledge, and priority for future research, so that this book is also useful for researchers

who have an interest in this area. All aspects are dealt with in considerable detail, but inclusion of summary boxes also helps in conveying the most relevant key messages.

Neuropsychiatric Symptoms of Epilepsy is a valuable resource for everyone involved in the care of people with epilepsy, and also for physicians who specialize in the management of psychiatric disorders. Specifically, this book should be especially useful to neurologists, geriatricians, psychiatrists, neuropsychiatrists, neuropsychologists, specialized nurses, as well as scientists engaged in basic and clinical research on epilepsy and its comorbidities.

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Foreword II

This book is a contribution to a series titled *Neuropsychiatric Symptoms of Neurological Disease* and forms a pivotal contribution to the very meaning and understanding of today's neuropsychiatry. The specialty of neuropsychiatry has a long and a shorter history. The hint of a brain basis for behavioral disorders stretches back to the times of Hippocrates, but really did not develop until the Renaissance and the later Enlightenment epochs. These times gave us early pioneers of the exploration of brain anatomy and more careful description of what we may refer to as neuropsychiatric disorders. These ideas burgeoned in the later nineteenth century, but there was more interest in mystical experiences, memory, and dreams, and in the brain as a creative organ, not just a passive receptor of sensory stimuli to be responded to in a reflex fashion. Then came the psychological insights of Sigmund Freud (1856–1939) exploring the unconscious palimpsest of behavior and its disorders. This had the unfortunate consequence of pulling a psychologically based neuroscience-free psychiatry away from the “new” discipline of neurology as we know it today. Into the void fell many patients, whose clinical signs and symptoms were poorly embraced by such a division. Of those falling, seizures were a particularly florid example of the conceptual muddles which arose, as more and more people with epilepsy came solely under a neurological purview, which had become divorced from any broader perspective on the associated comorbidities. The latter were occasioned by several factors, including social and educational limitations, stigma, the failure in a significant proportion of people to stop seizures, and the adverse effects of antiseizure medications.

Further there was scant regards to the neuroanatomical and neurophysiological substrates of epilepsy. It was considered that the seizure was all that demanded attention, and if they went away, then the patient would need no more help and also go away. Yet it was obvious that the seizure itself was but one expression of the underlying cerebral abnormalities, which are continuous and persist and continue to disrupt the organization of the brain. Since many people with epilepsy have such changes in the medial temporal cortex, and since it has been known for over a century that structures there are intimately linked with emotional regulation and expres-

sion, it is hardly surprising, unless ignorant of neuroanatomy, that there would be behavioral consequences beyond the seizures.

The psychoses associated with epilepsy have been well described since the mid-nineteenth century, as were the personality styles and the longer-term cognitive changes. Interest in them fell into abeyance for the better part of the twentieth century, but the introduction of the EEG in clinical practice provided a linchpin for recognizing the inter-ictal abnormalities and the association between temporal lobe epilepsy (as it was appropriately called) and associated cognitive and psychiatric disorders. Interestingly, it was not the traditional neurologists who embraced these findings, but lay organizations, parents, and carers, who had long known about such problems, but did not find a sympathetic ear for explanation or understanding.

Things have now changed considerably, and there are many people actively studying comorbidities of epilepsy, examining the effects of treatment for seizures on the mental state and behavior, and grappling with the ever-present problem of diagnostic challenges distinguishing epileptic from non-epileptic attacks.

The modern era of clinical neuropsychiatry began perhaps around the 1980s. My own *Neuropsychiatry* was published in 1981, and Jeff Cummings' *Clinical Neuropsychiatry* in 1985. The British Neuropsychiatric Association was established in 1987, the American Neuropsychiatric Association in 1988, and the Japanese Neuropsychiatric Association in 1996. The International Neuropsychiatric Association (INA) was formed in 1998 – neuropsychiatry is now a well-recognized discipline in many countries.

In *Neuropsychiatry*, I had ventured the following definition: Neuropsychiatry is a discipline which references certain disorders “which, on account of their presentation and pathogenesis, do not fall neatly into one category, and require multidisciplinary ideas for their full understanding.” The clinical aspects of the subject matter were central and cover a spectrum of disorders. Yet, neuropsychiatry is not only interested in clinical abnormalities that are explained by our understanding of brain-behavior relationships, it is concerned with the “meaning” of abnormal behavior. This requires consideration of content as well as form, and the various life contingencies which impinge on patients which may influence their signs and symptoms. This recognizes the distinction between disease (pathology) and illness (what patients present with), and a propensity to tolerate diagnostic uncertainty. Alwyn Lishman in his paper *What is Neuropsychiatry?* explained that neuropsychiatry was not an “all-exclusive domain” embracing only the neurosciences, but “Social, developmental, psychodynamic and interpersonal forces must also be considered.”

Neuropsychiatry is not simply an offshoot of psychiatry. It is a discipline which has arisen out of a clinical need for patients who have fallen badly between the cracks engendered by the developments of the clinical neurosciences in the twentieth century. Neuropsychiatrists must understand the signs and symptoms of a range of central nervous system disorders, as well as the psychology behind human motivation and desire. Nowhere is this more apparent than in dealing with epilepsy. In the nineteenth century, those most interested in the neuropsychiatry of epilepsy were from France and Germany. The tradition in England is to be found in the writings of Hughlings Jackson (1835–1911), whose contributions to understanding the

way the workings of the damaged brain are profound, and should form essential reading for any budding neuropsychiatrist.

In England after the Second World War, a strong tradition for managing epilepsy developed at the Maudsley Hospital, covering not only the use of the EEG, and the recognition of comorbidities, but also noting the effects of treatments on the mental state including temporal lobectomy. The legacy of this era has remained strong to the present day, and can be felt through this current text devoted to the neuropsychiatry of epilepsy. It is encouraging to read such a wide range of up-to-date information from colleagues from many different countries, with Marco Mula as conductor of the orchestra. This book is a substantial contribution, covering all of the important areas of the neuropsychiatry of epilepsy, one of the most interesting and absorbing disorders in clinical medicine.

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