Brain and Bannister's Clinical Neurology

Seventh Edition

Revised by

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Preface to the seventh edition

Lord Brain's second edition of *Clinical neurology*, published in 1964, was a success with both students and doctors. The success was due in large measure to his capacity to summarize complex thought in lucid, almost deceptively simple prose. During the last 25 years, throughout my revision of the last five editions, I have striven to preserve the basic descriptive passages on common neurological disorders, with that same clarity.

But every reader will be aware that in the 27 years since Lord Brain's second edition neurology has been transformed almost beyond recognition by the era of scientific investigation and molecular biology. Now it is possible to use all manner of immunological and biochemical investigation as well as sophisticated electrophysiology and complex imaging techniques to reach a far more precise diagnosis. But it is important to emphasize that clinical neurology still remains an art as well as a science, and that art depends on careful history-taking and neurological examination, both of which continue to be stressed. The main purpose of the book is still to explain clearly to physicians, general practitioners, and students how to diagnose and treat common neurological disorders. This edition includes enough detail to take a medical student and young doctor up to the level required for membership or equivalent general medical specialist qualifications. It aims to be readable and, moreover, capable of being read within the span of a neurological course.

The basic text still seeks to emphasize what I believe remains the fundamental attraction of neurology. There is an orderliness in the neat balance between the clinical history, often combined with subtle psychological aspects, and knowledge of the basic anatomy and physiology of brain function. These basic sections needed some revision. The neurologist has to make first an anatomical diagnosis and then a pathological diagnosis, and finally a functional assessment in terms of the patient's management. My aim has also been to provide some insight into the exciting new scientific developments in neurology in the hope that these will stimulate the reader but not divert him too much from the core of basic neurological information.

Since I prepared the sixth edition in 1984, there have been extraordinary technical advances that have been most marked in two areas, molecular genetics and new imaging techniques, and I have added new sections on these topics.

Using DNA technology, the precise gene location is known in several diseases
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(such as Duchenne dystrophy) and the general site in many more diseases, giving for the first time the possibility of an antenatal diagnosis of disabling neurological disorders whose incidence can be reduced by genetic counselling.

The new section on imaging techniques includes positron emission tomography (PET) scanning which, though only available to a few centres, now brings a new biochemical dimension to imaging which, virtually non-invasively, labels isotopes so that their distribution in the brain in disease can be precisely located. This provides a quantum leap forward in our understanding of brain function. The new techniques of scanning (CT, MRI, PET, and SPECT) are powerful tools for obtaining greater precision of localization of lesions within the brain and spinal cord, but they bring with them a significant potential drawback. If it is hoped that they will provide a short cut to diagnosis by reducing the need for core needle biopsy and examination, this is a mistaken notion and the physician will not infrequently find that the process leaves him or her with a patient with symptoms but apparently normal investigation results. Moreover, the traditional methods of history-taking and examination should in fact bring the physician very close to a general, if not a totally precise, diagnosis. Also, it must be remembered that in many countries in the world these sophisticated aids to diagnosis and treatment are simply not available, nor likely to be available in the foreseeable future.

This volume has a new chapter on the neurological complications of AIDS, of which there are now estimated to be between 5 and 10 million patients worldwide, of whom at least three-quarters will have neurological involvement before death. There have been many other entirely new topics introduced and there have been major revisions to most chapters but particularly those on vascular disease, the dystonias, Alzheimer’s disease and dementia, parkinsonism, neuromuscular diseases, multiple sclerosis, and the neurological consequences of neoplasms. New material has been added on many topics, including extradural haematomas, the Lambert–Eaton myasthenic syndrome, inflammatory myopathies, Huntington’s disease, the Lesch–Nyhan syndrome, cerebral malaria, the anterior spinal artery syndrome, chronic inflammatory demyelinating neuropathies, sarcoidosis, the MPTP parkinsonian model, multiple system atrophy, the lipidoses, the Arnold–Chiari malformation, cerebral palsy, mental retardation and the genetically determined metabolic diseases of childhood, the metabolic encephalopathies and myopathies, infantile spasms and the myoclonic epilepsies, Lewy body disease, Lyme disease, lead encephalopathy, and botulism.

The sections on treatment have been revised throughout. Gene therapy for neurological disease remains a prospect on the horizon. The hoped-for advances in the possible transplant of cells to reverse the degenerative changes in Parkinson’s disease have not yet proved successful. There are, however, some quite surprising new techniques that have provided relief of neurological disorders, such as the injection of botulinum toxin to reduce the severity of dystonias. There is also now proof of the benefit of plasma exchange transfusion
in certain autoimmune disorders. We now have a more encouraging prospect than ever before of alleviating if not curing a large number of neurological disorders.

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