

Aicardi's Diseases of the Nervous System in Childhood; 4th Edition

Arzimanoglou A, O'Hare A, Johnston MV, Ouvrier R (Editors), Mac Keith Press, 2018.

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Jean Aicardi is a name synonymous with modern child neurology. Single-handedly, he wrote the first edition of the book, which bears his name and was published in 1995. The fourth edition, 23 years later, is edited by four eminent child neurologists and written by 47 authors. Recent advancement in areas of neuroimaging, molecular biology, and molecular genetics have unravelled many of the mysteries that challenged paediatric neurologists over the years, leading to a better understanding of many disease processes, but also bringing with them new challenges and higher expectations.

A good medical book provides answers to clinical questions and difficult situations and a better book stimulates the inquisitive minds of its readers and provides a scientific basis for the disease and its treatment. However, the best book does not only provide the science for treating diseases, but also offers guidance on the art of managing patients' illnesses, distress, and expectations.

The study of neurology is a journey through the stages of the life cycle. Child neurology is the study of the brain's structure, function, development, maturation, and diseases from conception into adulthood. A second journey completes the cycle of the fully mature functional adult brain into old age with brain degenerative processes. **Aicardi's Diseases of the Nervous System in Childhood** covers the first leg of the journey with chapters on foetal neurology, perinatal disorders, genetic and syndromic diseases, neuro-metabolic disorders, infections, parainfectious and immune disorders, vascular, neoplastic, hereditary degenerative diseases, accidental and non-accidental brain injuries, and paroxysmal disorders; in other words, the whole lot.

The book is rich in its coverage of common and rare neurological disorders as would be expected from a book of its remit, but it also covers some and often forgotten disorders such as bilirubin encephalopathy and Reye syndrome, as well as the unusual complications of modern perinatal medicine such as spinal

cord infarction; a rare complication of umbilical arterial catheterisation. This book also provides readers with an excellent introduction to new diseases (Zika virus microcephaly) and a modern understanding of old diseases (the genetics of epilepsy, neuroinflammatory and autoimmune diseases) and modern therapeutic modalities (deep brain electrical stimulation, neuro-modulation, and the use of monoclonal antibodies).

The aim of **Aicardi's Diseases of the Nervous System in Childhood**, as stated in the preface of the 4th edition, is to be "a reference book for practising child neurologists and to provide a comprehensive overview for those training in child neurology". For this end, the book has become a compilation of a comprehensive list of diseases and topics in child neurology. Such an approach might be a good approach once a diagnosis is made and a clinician or a trainee wishes to look up more information about the disease.

It is also stated in the preface that it was a deliberate decision "not to include a specific section on the neurological examination of infants and children at various ages or give data on maturation of the nervous system, as there are already excellent books and monographs on these topics". I believe that inclusion of a chapter on the art of conducting neurological examination and including sections in other chapters dedicated to symptom analysis and possibly "a real case" to illustrate the clinical presentation of conditions in question brings life to the discussion and adds value to the book, especially in this digital era of books with access to multimedia.

As a reference book, it is not meant to be read from cover to cover, hence I searched the book for some specific topics. I looked up coma and the Glasgow Coma Scale (GCS), but could find no record of how GCS is scored in children of different ages despite being mentioned dozens of times, and a recommendation has been given to make a rapid assessment of the child with traumatic brain injury using a young-child adaptation of the GCS where appropriate.

I also looked up the subject of epilepsy as it is a very common disorder, and in a typical general paediatric neurology clinic more than half of the patients will have epilepsy. It is not surprising that 150 pages (10% of the available pages) of **Aicardi's Diseases of the Nervous System in Childhood** are dedicated to epilepsy including the different approaches to classification, up to the most recent ILAE classification of 2017. The study of genetic causes of epilepsy is ever expanding and this chapter lists known single gene mutations with their implication for potential future targeted and specific treatments. Adequate discussion is given in the treatment section

to enable accurate and reliable interpretation of electroencephalography (EEG) and high definition MRI scans in order to select patients who will benefit from surgical treatment of epilepsy and other interventional therapies.

Aicardi's Diseases of the Nervous System in Childhood is a valuable resource and a reference book to practicing child neurologists, trainees, and all physicians looking after children in acute hospital settings or office practice, or managing children with chronic neurodisabilities. It will, undoubtedly, make its way to the desks, computers, and laptops of many paediatric neurologists. □

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