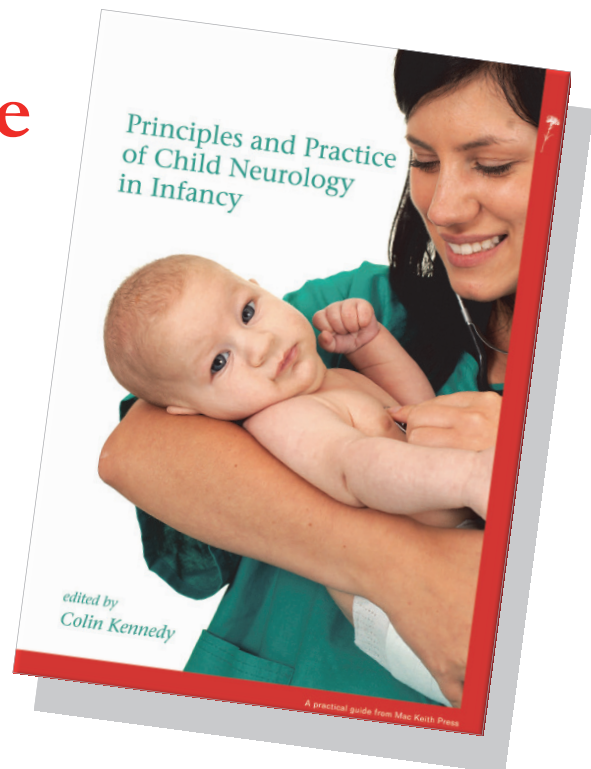




Principles and Practice of Child Neurology in Infancy

Edited by
Colin Kennedy
Southampton University, UK



- An up-to-date summary of current clinical practice that will be useful in both resource-rich and resource-poor countries
- Sets out principles of prevention and management of neurological disease in infancy
- Symptom-based, practical approach for the specialist and non-specialist
- Consistent approach allows quick retrieval of essential information

For specialists in paediatric neurology and disability; paediatricians; and to other health professionals in the multidisciplinary team.

“International authorities in child development and child neurology have contributed to this important handbook with the able editorial support of Dr. Colin Kennedy. The content will be an accessible and valuable resource to clinicians whose focus is exclusively the care of young children and to those who are charged with the care of individuals across the age span. Infancy can be a daunting period of diagnostic and therapeutic challenge and this handbook will bring needed support to those charged with the care of infants, no matter what their individual level of experience may be. This handbook makes an important contribution to the knowledge clinicians need in order to be most effective.”

Robert W Armstrong MD PhD FRCPC, from the Foreword

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Foreword

The publication of a handbook on neurological disorders in infancy is an important contribution to health professional practice. The first 1000 days – 9 months of gestation followed by the first two years of life – are critical to the healthy development of a child and it is in this period that the foundations of neurological function are established. The first year is frequently the period of first presentation of neurological disorders and having a handbook focused on the this period is of particular value.

One of the challenges that the book highlights is the wide variation in clinicians' understanding of development, their recognition of the importance of prevention and promotion practices that support healthy development, and the challenges of diagnosis and management of common neurological conditions during this period. In order to address these concerns the book is structured to first provide this background information in a number of chapters that cover basic definitions, the importance of teamwork and the role of families in supporting development, prevention and promotion strategies and developmental assessment.

The first section covers the key diagnostic resources that are required in this age group, some or all of which may be available to clinicians in their assessment of infants with an apparent neurological disorder.

The chapter on evidence-based medicine is an important reminder that practising evidence-based medicine helps ensure that as clinicians, the concept foremost in our minds is to do no harm.

Therapeutics for infants can be challenging and an area of potential risk given that some physicians treating infants may not be specifically trained in their care and therapeutic windows can be narrow. This chapter combined with the specific clinical chapters will be a useful support to clinicians with limited experience with this age

group. Reference to the World Health Organization information on essential medicines for children will be supportive to those clinicians working in resource-limited regions of the world.

The second section of the handbook has chapters focused on the major disorders that present in infancy, including febrile and non-febrile encephalopathies, the range of presentations that occur with seizures, macro- and microcephaly, and neuromotor disorders including the 'floppy infant', cerebral palsy and other movement disorders. The section concludes with a most important chapter on progressive loss of skills.

The Chapters in the handbook are structured in a way that allows the reader to easily identify areas of interest while skipping over those chapters where the content is familiar to them.

International authorities in child development and child neurology have contributed to this important handbook with the able editorial support of Professor Colin Kennedy. The content will be an accessible and valuable resource to clinicians globally, from resource poor to resource rich environments and to clinicians whose focus is exclusively the care of young children to those clinicians, often in resource poor countries, who are charged with the care of individuals across the age span. Infancy can be a daunting period of diagnostic and therapeutic challenge and this handbook will bring much needed support to those charged with the care of infants, no matter what their individual level of experience may be. Effective management of neurological disorders during this period can have a long-term impact on the health and further development of these infants and this handbook makes an important contribution to the knowledge clinicians need in order to be most effective.

Robert W Armstrong, MD PhD FRCPC
Professor and Foundation Dean
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Preface

The spark that eventually led to this book was the publication of a systematic observational assessment of paediatric hospital care in parts of Eastern Europe and Central Asia by the World Health Organization (WHO).¹ The study identified over-investigation, over-diagnosis and over-treatment of neurological disease, especially in infancy. Discrepancies between local and international diagnostic classification systems were a major contributory cause of these problems. At around the time of that publication, senior clinicians from the region were seeking to strengthen links with the relevant Western European specialty groups. A dialogue with the European Office of WHO ensued and a plan to provide guidance for neurological management was included within a 2009–2011 grant from the European Commission to WHO to improve maternal and child health in the Republic of Kazakhstan.

The present book provides not only clinical guidance but also defines normality and abnormality in the field of child neurology and neurodevelopment and sets out principles of prevention and management of neurological disease in infancy. The final result is a volume outlining the management of suspected neurological and neurodevelopmental disorders that is applicable in all parts of the globe.

The book is in two parts. The first part sets out the principles of working with families, of clinical assessment and of the use of investigations, treatments and evidence-based medicine. The second part provides detailed guidance on the practice of child neurology as it applies to infancy. This symptom-based, rather than disease-based,

¹Duke T Keshishyan E, Aigul Kuttumuratova A et al. Quality of hospital care for children in Kazakhstan, Republic of Moldova, and Russia: systematic observational assessment. *The Lancet* 2006, 367: 919–25.

approach should make the content accessible to all, whatever their background knowledge of disease classification.

This book is the result of the work of an international working group, drawn from the European Paediatric Neurology Society and the European Academy of Childhood Disability and chaired by myself, and a Kazakh working group, chaired by Dr Altynshash Jaxybayeva. There have been two striking features of this project. The first is that the contributors displayed their enthusiasm to share their expert knowledge. The second feature has been the engagement of clinical colleagues on the working group in the Republic of Kazakhstan. Their willingness to change and desire to modernise is apparent not only from their attitude to the content of this book but also in their commitment to undergraduate and postgraduate medical training based on knowledge of internationally accepted principles and practice in the care of children with neurological problems.

The book is an up-to-date summary of current clinical practice that will be useful in both resource-rich and resource-poor health systems to those practising as specialists in paediatric neurology and disability, to any paediatrician dealing with epilepsy and other neurological disorders and to other health professionals in the multidisciplinary team.

Colin Kennedy
Southampton, September 2012

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