Surprisingly paediatric and adult neurology practice appear, superficially, separate disciplines with training pathways that rarely cross. The truth is that we, in time, will inherit some, though not all patients, and knowledge of neuropaediatrics is an essential part of our training curriculum. There are obvious points of contact such as the “handover” of the adolescent with epilepsy and the presentation of adult disease in childhood. The adult, late onset of childhood disease, however, taxes most neurologists, as does knowledge of the lexicon of congenital abnormalities. In our practice we commonly encounter persons with learning difficulties and cerebral palsy often without an informed understanding of the complexities that underlay such generic terminologies. Also the neuropsychiatric syndromes in childhood may well persist into or manifest in other ways in adult life. This supplement cannot hope to provide a comprehensive coverage of neuropaediatrics, a specialty in its own right. With the trainee’s needs in mind, and with the guiding hand of Chris Verity, we have selected topics that are probably not normally addressed in the average trainee’s programme in the hope that they will encourage a greater understanding.

Our route map will attempt to cover some of the areas where there is more conventional overlap with adult neurology, where familiar “adult” diseases present in the paediatric age range and some where paediatric disease present in adults. Other topics, such as neuromuscular disorders, oncology, and infections will be dealt with in future issues of Neurology in Practice.

KEY REFERENCES

Headache
  This comprehensive review outlines definitions, classification, diagnostic evaluation and treatment options.
  A complimentary well referenced review addressing prevalence and natural history of childhood headache disorders. The role of 5-HT 1b1d agonists is discussed as well as other acute treatments. The lack of randomised controlled trial data in childhood prophylaxis is emphasised
  A further well referenced review outlining evidence for treatment, efficacy and side effects.
  The same author elaborates on the relations between stress and primary headache disorders in childhood and adolescence, particularly helpful to the adult neurologist.

Stroke: ischaemic/haemorrhagic
  The authors, as a result of a Medline search, define characteristics of arterial dissection in 118 cases. Male predominance, intracranial location, and absence of trauma distinguish anterior circulation arterial dissection from its adult counterpart. Vertebral artery dissection appears to present similarly across all ages.
  While in adults, over the last two decades, control of risk factors has resulted in declining mortality, childhood trends had not previously been explored. This study addresses stroke mortality (ischaemic and haemorrhagic, including subarachnoid haemorrhage) in the under 20s. The study provides
valuable epidemiological data and, similar to adults, shows a dramatic decline. The epidemiology of childhood stroke and better characterisation of risk factors is required.

- Minor head injury as cause and co-factor in the aetiology of stroke in childhood: a report of eight cases. Kieslich M, Fie

On the subject in childhood risk factors this small study concerns eight patients with compelling evidence of ischaemic stroke within hours (mean 16.3) of minor head trauma. Endothelial injury including dissection is postulated, and the authors suggest the frequency of trauma in idiopathic childhood stroke is underestimated. The presence of extra-pyramidal features in childhood as opposed to adult hemispheric stroke is intriguing.


This comprehensive review pulls together a great deal of data on epidemiology and current state of knowledge of vascular risk factors in the young.


The role of infection in childhood stroke is attracting great attention. The later study showed that 22 (31%) of 70 consecutive children with arterial ischaemic stroke had varicella infection in the preceding year (9% of controls). Basal ganglia infarcts were more common; vascular imaging showed large vessel stenosis. Varicella is postulated as an important risk factor and the impact of immunisation on the incidence of childhood stroke is worthy of further study.


This study serves to remind that Ehlers-Danlos syndrome type IV (the neurovascular form) presents in children but also, more commonly, in adults with intracranial aneurysms (often fusiform), abdominal aneurysms, and arterial dissections without skin or joint manifestations.

Demyelisation: multiple sclerosis variants/acute disseminated encephalomyelitis


The clinical course of multiple sclerosis in 116 patients with onset before 16 years is studied. The prevalence of such early onset disease is 3.6%. A relapsing and remitting course, high frequency of relapses, early disability, and the presence of malignant cases suggests to the authors early use of disease modifying treatment.


A report of their experience from one of the few groups with expertise in managing children with these drugs.


Two papers that review acute disseminated encephalomyelitis and multiple sclerosis variants in children. The former paper address radiological and clinical findings but also reviews treatment advocating steroids despite the lack of randomised controlled trial data.

Inborn errors of metabolism


Excellent review of inborn errors of metabolism, that tend to be thought of as paediatric diseases, that can present in adult life. Worth keeping in your brief case.

Societies/patient and family support groups

- www.cafamily.org.uk

Many children suffer serious neurological disability, often with a rare syndrome. The majority of such children are cared for at home. This UK charity offers support and advice to parents by providing an A–Z of websites, practical advice, and information. Families caring for disabled children face isolation, lack of responsive support services, inadequate information, and inevitable financial worries. This invaluable site allows contact and exchange of experiences between families, with detailed information on over 1000 syndromes and disorders. Do visit it.