

American Academy of Neurology Child Neurology Section Resident Core Curriculum

10/15/01

The training in Child Neurology encompasses all areas of neurology with specific application to infants, children and adolescents. The Adult Neurology residents have a minimum of three months to gain experience in clinical management in the in-patient, outpatient, consultative, and emergency settings. This experience is broadened by seminars, conferences, and lectures in the basic and related sciences.

Learning Objectives

I. The resident should be able to:

- A. Perform a neurological history, examination, and developmental evaluation of children of all ages.
- B. Describe the growth and development of the nervous system.
- C. Describe normal neurological development of the infant, child and adolescent.
- D. Demonstrate knowledge of the cardinal manifestations of neurological disease.

II. The curriculum should include the following:

- A. Epilepsy
 - List the common causes of seizures in the infant, child and adolescent
 - Describe the management of status epilepticus
 - Describe the evaluation and management of new onset and recurrent seizures, including febrile seizures
 - Recognize epilepsy syndromes and their prognoses
 - Distinguish seizures from nonseizure events, e.g. syncope, jitteriness, breath holding spells
- B. Altered Level of Consciousness
 - Describe the major disease categories that cause lethargy and coma
 - Diagnose brain death in children and the persistent vegetative state
- C. Headache

- Describe the features of headache in migraine, increased intracranial pressure, and tension
- Describe the evaluation and therapeutic approach

D. Psychomotor Retardation and Behavioral Problems

- Describe the approach to the child with learning disability, delayed speech, mental retardation, impaired attention, and behavioral problems

E Neonatal Neurology

Discuss the evaluation and treatment of common disorders in the term and preterm infant, including intracranial and intraventricular hemorrhage, neonatal encephalopathy, neonatal seizures, and periventricular leukomalacia.

F. Neurodegenerative Disorders

- Discuss the presentation, evaluation and therapeutic approach to lysosomal storage disease, peroxisomal disorders, mitochondrial disorders, amino acid disorders and other metabolic and genetic disorders

G. Motor Unit Disorders

- Describe the presentation and clinical course of disorders of the motor unit to include anterior horn cell (SMA), peripheral neuropathy (hereditary and non-hereditary, CMT), demyelinating (Guillain-Barre syndrome), neuromuscular junction and muscle disorders (Duchenne Muscular Dystrophy, Myotonic Dystrophy)

H. Upper Motor Neuron Syndromes

- List the major causes of stroke in childhood and describe evaluation and therapeutic options
- Describe causes, evaluation and therapy of cerebral palsy
- Discuss the etiology and complications of a child with spinal dysraphism, hydrocephalus
- Discuss the etiology and complications of a child with brain malformation
- Discuss the etiology and complications of a child with traumatic spine and brain injury

I. Movement Disorders

- Discuss the differential diagnosis of tic (including Tourette Syndrome), chorea, ataxia, and dystonia
- Describe medications that can induce movement disorders

J. Neoplastic Disorders

- Discuss the most common tumors of the neural axis in childhood (particularly those of the posterior fossa) ; the presenting symptoms and diagnostic evaluation

K. Infectious and Inflammatory Disorders

- Discuss the most common infections of the neural axis in childhood (meningitis, encephalitis) and the evaluation and treatment
- Discuss ADEM (acute disseminated encephalomyelitis) and MS in children

L. Neurocutaneous Syndromes

- Discuss the common disorders and the clinical manifestations

M. Special Senses

- Describe disorders of the visual and hearing system, acquired and congenital

Teaching Resources:

Pediatric Neurology: Principles and Practice
Kenneth Swaiman and Stephen Ashwal

Neurology of the Newborn
Joseph Volpe

Clinical Pediatric Neurology: A Signs and Symptoms Approach
Gerald Fenichel

Neurologic Aspects of Pediatrics
Bruce Berg

Epilepsy in Children
Jean Aicardi