

COMMENTARY. **Diagnosis of Lambert-Eaton myasthenic syndrome.** Usually diagnosed as a paraneoplastic disease affecting middle-aged adults with small-cell lung cancer, Lambert-Eaton myasthenic syndrome (LEMS) may occur as a primary autoimmune disorder in younger adults and rarely in children. Proximal muscle weakness, absent reflexes, normal serum creatine kinase, and autonomic dysfunction should prompt electrodiagnostic testing for LEMS. Low-amplitude compound muscle action potentials with >100% facilitation following 10 seconds of voluntary exercise or in response to high frequency repetitive motor nerve stimulation (when tolerated) is diagnostic. Serum titers of voltage-gated calcium channel receptor antibodies specific to LEMS will differentiate the disorder from myasthenia gravis [1][2]. Identification of LEMS will prompt a search for malignancy.

**References.**

1. Hajjar M, et al. *Pediatr Neurol.* 2014 Jan;50(1):11-7.
2. Morgan-Followell B, Reyes EL. *Neurology.* 2013 May 21;80(21):e220-2.

## VASCULAR DISORDERS

### **ARTERIAL ISCHEMIC STROKE PROSPECTIVE STUDY**

Investigators from Departments of Paediatric Neurology, Bristol Royal Hospital for Children, the Institute of Child Health, London, and other centers in the UK, conducted a prospective population-based study of 96 children aged 29 days to 16 years with radiologically confirmed arterial ischemic stroke (AIS) occurring over a 1-year period (July 2008 to June 2009) in southern England. The incidence of childhood AIS was 1.60 per 100,000 per year, highest under age 1 year (4.14 per 100,000 per year). Sexes were equally susceptible. Asian (relative risk 2.14) and black (2.28) children were at higher risk of AIS than white children. Prevalence in Asian children may be explained by frequency of iron deficiency anemia. The increased risk for black children was largely explained by sickle-cell disease. Focal neurologic deficits, particularly hemiparesis, were the most common presenting feature. Seizures were more common in infants (</- 1 year), occurring in 75% of those aged < 1 year, and headache more common in older children (>5 years; p<0.0001), possibly because of increased reporting bias. Close to half the patients had multiple risk factors, and a third of cases had an arteriopathy, possibly related to infection. (Mallick AA, Ganesan V, Kirkham FJ, et al. Childhood arterial ischemic stroke incidence, presenting features, and risk factors: a prospective population-based study. **Lancet Neurol** 2014 Jan;13(1):35-43).

COMMENTARY. Risk factors for childhood AIS include age and race but not sex. The American Heart Association Stroke Council provides recommendations for the prevention of ischemic stroke caused by sickle cell disease, moyamoya disease, cervicocephalic arterial dissection, and cardiogenic embolism. Protocols for dosing of heparin and warfarin in children are suggested. Evaluation and management of perinatal stroke are also discussed, including recommendations [1].

**References.**

1. Roach ES, et al. *Stroke.* 2008 Sep;39(9):2644-91.