

## **BRAIN DEVELOPMENTAL LESIONS**

### **COGNITIVE FUNCTION AND PEDIATRIC ARACHNOID CYST**

Neurocognitive and psychological functions were investigated in 35 consecutive children with arachnoid cyst (AC) and 35 healthy controls, in a study at Severance Children's Hospital, Yonsei University College of Medicine, Seoul, Korea. Ages ranged from 5 to 15 years (mean 7.94 $\pm$ 3.12); 28 males and 7 females. Locations of the AC were mainly temporal (n=22), frontal in 6, suprasellar (4), and posterior fossa (3). Tests included the Korean WISC-III, ADHD diagnostic panel, executive function, depression inventory, and anxiety scale. Intelligence scores in AC subjects were not different from controls. Internalization, anxiety, social immaturity, externalization, and aggressive behavior scores were significantly higher in AC subjects. Parenting stress in the AC group was higher than in control group. Of 28 with Sylvian location, 22 had compressed temporal lobes and 6 had compressed frontal lobes. Those with compressed frontal lobes showed more problems with sustained attention and more anxiety than the temporal lobe group. Left hemisphere AC was associated with increased anxiety compared to right hemisphere cyst. The 20 patients who required AC surgery showed no significant differences in IQ, memory or anxiety compared to the nonsurgical group. (Park YS, Eom S, Shim K-W, Kim D-S. Neurocognitive and psychological profiles in pediatric arachnoid cyst. **Childs Nerv Syst** September 2009;25:1071-1076). (Respond: Dr Dong-Seok Kim. E-mail: [dskim33@yuhs.ac](mailto:dskim33@yuhs.ac)).

COMMENT. Neurocognitive function is not impaired in children with arachnoid cyst (AC), but AC in the left hemisphere, frontal location is associated with more anxiety. Symptoms of ADHD are more prevalent in children with AC. (Millichap JG. Temporal lobe arachnoid cyst-ADHD syndrome. Role of the EEG in diagnosis. **Neurology** 1997;48:1435-1439).

**CSF overdrainage in shunted intracranial AC.** Researchers in Murcia, Spain, report 5 patients with acquired Chiari I malformation and 3 with posterior fossa overcrowding due to excessive CSF drainage in shunted intracranial AC. (Martinez-Lage JF et al. **Childs Nerv Syst** Sept 2009;25:1061-1069). Symptoms related to hindbrain herniation developed after an average interval of 5 years following the shunt.

### **HIPPOCAMPAL AND CONGENITAL BRAIN MALFORMATIONS**

Sixty two patients, aged 15 days to 18 years, with congenital brain malformations were evaluated retrospectively to determine the association of various brain malformations with hippocampal abnormalities, in a study at Baskent University, Ankara, Turkey. Indications for MRI included seizures in 26, growth retardation in 10, headache (9), and microcephaly (4). Primary malformations included corpus callosum agenesis in 36, lissencephaly (9), and heterotopias (6), Hippocampal abnormalities were associated in 43 (69%) patients, and especially those with cortical dysplasia (100%), lissencephaly (78%), and corpus callosum agenesis (72%), (Donmez FY, Yildirim M, Erkek N, Karacan CD, Coskun M. Hippocampal abnormalities associated with various congenital malformations. **Childs Nerv Syst** 2009;25:933-939). (FY Donmez. E-mail: [fuldemyildirim@yahoo.com](mailto:fuldemyildirim@yahoo.com)).