

## VARICELLA ZOSTER MENINGITIS IN AN IMMUNIZED CHILD

A 5-year-old girl with varicella-zoster virus meningitis who had received the VZV vaccine 18 months previously is reported from the University of Chicago. She presented with a 5-day history of fever, headache, and a rash on the face and trunk, with diffuse papules, vesicles, and scabbed lesions. CSF showed 715 white cells with 97% lymphocytes, protein 133 mg/dL, glucose 46 mg/dL (serum glucose 86 mg/dL), and no bacteria on Gram-stain. CSF was positive for VZV by polymerase chain reaction. After a 10-day course of acyclovir, she made an uneventful recovery. A follow-up hearing test 6 weeks later revealed a right-sided sensorineural hearing loss, which had resolved when tested 2 years later. (Schwab J, Ryan M. Varicella zoster virus meningitis in a previously immunized child. *Pediatrics* August 2004;114:e273-e274). (Respond: Joel Schwab MD, 5839 S Maryland Ave, MC 3055, Chicago, IL 60637).

COMMENT. In an earlier report of VZV meningitis in a previously immunized child, there was evidence of seroconversion 4 weeks after immunization (Naruse et al. 1993), and the child had been exposed to a case of varicella 2 weeks before the illness. In the present case, there was no laboratory evidence of seroconversion and no known exposure to varicella. Although rarely reported, breakthrough cases of varicella with neurologic complications may occur in vaccinated children.

## VASCULAR DISORDERS

### CEREBRAL SINUS THROMBOSIS AND PERIORBITAL BRUISING

Two patients, females aged 24 and 25 years, with raised intracranial pressure and dural venous sinus thrombosis, who presented with periorbital bruising, are reported from Moorfields Eye Hospital, and the National Hospital for Neurology and Neurosurgery, London, UK. Patient 1 had a history of migraine, and spontaneous periorbital bruising was preceded by a 1-week history of severe generalized headache that awakened her at night and was associated with vomiting, photophobia, and neck stiffness. She had bilateral acute papilledema, and brain CT findings were consistent with a thrombosis of the superior sagittal sinus and a venous infarct in the right frontal lobe, confirmed by MRI and MR venography. Periorbital bruising resolved after treatment with heparin and warfarin. Patient 2 was 25 weeks pregnant when she presented with periorbital bruising, headache, neck stiffness, vomiting, and photophobia. She had a sixth nerve palsy and papilledema, and the MRI and MRV were normal. CSF had an opening pressure of 46 cm, and normal constituents. Headache improved after lumbar puncture, and bruising resolved in the weeks following treatment with acetazolamide. Dural sinus thrombosis was considered likely. (Hadjikoutis S, Carroll C, Plant GT. Raised intracranial pressure presenting with spontaneous periorbital bruising: two case reports. *J Neurol Neurosurg Psychiatry* August 2004;75:1192-1193). (Respond: Dr GT Plant, The National Hospital for Neurology and Neurosurgery, Queen Square, London, WC1N 3BG, UK).

COMMENT. Periorbital bruising is considered a unique complication of dural sinus thrombosis with raised intracranial pressure. In patient 1, the bruising had initially been mistaken for a case of assault.

**Long-term prognosis of cerebral venous thrombosis (CVST) in childhood** was studied in 17 children, aged 1 month to 16 years, at University Medical Center Utrecht, the Netherlands. (De Schryver ELLM, et al. *Dev Med Child Neurol* August 2004;46:514-519). Mean follow-up was 2 years 8 months. The cause of CVST was mastoiditis in 10, complicated by meningo-encephalitis in 2; 2 had acute lymphatic leukemia, 1 a non-Hodgkin's lymphoma, 1 had sickle cell disease, and 1 a malignant histiocytosis and bone marrow transplantation. Twelve presented with raised intracranial pressure, 8 had seizures, and 3 had a focal paresis. The sigmoid sinus was involved in 12, and superior sagittal in 4. Five died of heart tamponade, meningo-encephalitis, or infection complicating cancer, 3 at an early stage and 2 during follow-up. Mean age of 12 survivors at follow-up was 8 years 7 months (range 2 years 8 months to 20 years). No neurologic deficits occurred in 11, and a mild disability in 1. Chronic daily headache occurred in 2, and only 1 of 4 survivors with seizures still required AEDs after 1 year follow-up. All of 10 tested had average or above average IQ, 2 had mild learning or attention and behavior problems, and 3 had decreased physical wellbeing. Children who survive CVST have a fair prognosis, and most have normal cognitive and physical development. Mild cognitive deficits and reduction in quality of life are infrequent sequelae.

## CELIAC DISEASE AND STROKE

A 3-year-old girl who presented with recurrent episodes of transient hemiplegia and cerebral infarction was diagnosed with asymptomatic celiac disease in a report from Southampton General Hospital, UK. MRI, transcranial Doppler, and MR angiography were abnormal. Tests for celiac disease were positive, despite absence of gastrointestinal symptoms and normal growth and development. Antiendomysial immunoglobulin A antibodies were strongly positive, antitransglutaminase antibodies grossly elevated at over 200 U/mL (normal 1-15 U/mL), and duodenal biopsy confirmed the diagnosis. After a gluten-free diet, aspirin, and folate supplements, energy level and mood improved (in retrospect the child was considered lethargic and irritable before treatment), and neurodevelopment was normal at 1-year follow-up. The significant asymmetry between right and left middle cerebral artery velocities on Doppler studies had persisted. (Goodwin FC, Beattie RM, Millar J, Kirkham FJ. Celiac disease and childhood stroke. *Pediatr Neurol* August 2004;31:139-142). (Respond: Dr Goodwin, Department of Paediatric Neurology, Southampton General Hospital, Tremona Road, Southampton, SO16 6YD, UK).

COMMENT. Stroke has not previously been reported as a complication of celiac disease in childhood. In a recent study of neurologic complications of childhood celiac disease that involved 111 patients (Zelnick et al. *Pediatrics* June 2004;113:1672-1676; and reviewed in *Ped Neur Briefs* June 2004;18:46), neurologic disorders were diagnosed in 51% (cf 20% controls) and included chronic migraine headache, developmental delay, hypotonia, learning disabilities, ADHD, and epilepsy with occipital calcifications, but not stroke. As with stroke, the occipital lobe seizures may be associated with asymptomatic celiac disease.