

## VASCULAR DISORDERS

### **HYPERNATREMIA AND SODIUM INTAKE AS RISK FACTORS FOR INTRAVENTRICULAR HEMORRHAGE IN PRETERM INFANTS**

The association between sodium intake in the first week of life and risk of intraventricular hemorrhage (IVH) in preterm infants was studied by retrospective review of charts of 722 preterm infants with a birth weight of <1.5kg admitted to the tertiary care neonatal intensive care unit at St Louis Children's Hospital between Jan 2002 and Dec 2006. Daily sodium and fluid intake for each 24 hour period were recorded from the nursing charts for each of the first 7 days of life. No sodium was added to parenteral nutrition for the first 24 hours, and 1 to 2mEq/kg was added for the next 24 hours of life. Sodium intake on day 1, 2, and 3 was 2.39, 3.70, and 3.90 mEq/kg/day. Mean serum sodium on day 1, 2, and 3 was 138, 142, and 142 +/- 5 mmol/l. Grade II to IV IVH was associated with increased sodium intake (>4.5mEq/kg/day) on each of the first 3 days following birth. The association remained significant after adjustment for other risk factors, including severity of illness (CRIB score), pneumothorax, hypocarbia, hypercarbia, loss of weight in the first week, gender, and multiparity. The association of high sodium intake and IVH was of similar magnitude to that of risk factors such as pneumothorax. Although the rate and severity of IVH remained stable over the 5-year study period, sodium bicarbonate infusions decreased significantly from 27% in 2002 to 3% in 2006. Additional factors must influence daily sodium intake and IVH rate. The impact of restricting early sodium intake on IVH and neurodevelopmental outcomes in preterm infants should be tested by a large controlled trial. (Barnette AR, Myers BJ, Berg CS, Inder TE. Sodium intake and intraventricular hemorrhage in the preterm infant. *Ann Neurol* June 2010;47:817-823). (Respond: Dr Inder, Washington University, 600 South Euclid Ave, Campus Box 8116, St Louis, MO 63110. E-mail: [inder\\_t@kids.wustl.edu](mailto:inder_t@kids.wustl.edu)).

COMMENT. High sodium intake in the first week of life is a risk factor for intraventricular hemorrhage in the very low birth weight preterm infant. The avoidance of sodium in the first few days of life of preterm infants has been recommended, and no detrimental effects have been documented. (Hartnoll G et al. 2006).

## MOVEMENT DISORDERS

### **METABOLIC COMPLICATIONS OF ANTIPSYCHOTIC THERAPY FOR TOURETTE SYNDROME**

Seventy-three children with Tourette syndrome treated with antipsychotics were monitored for metabolic and neurologic side effects every six months in a study at University of Calgary, Alberta, Canada. A total of 45 (61.6%) children (mean age 11.5 years; 89% boys) developed abnormal lipid levels, abnormal body mass index values, or both while being treated with antipsychotic medications for a mean of 8.8 months. Eleven had Tourette syndrome only; the remainder had Tourette syndrome plus ADHD or OCD.