

## **CARBAMAZEPINE AND THYROID HORMONES**

Changes in serum thyroid hormone levels in 37 children with epilepsy receiving carbamazepine (CBZ) and valproic acid (VPA) were analyzed at the University of Chieti and University of Siena, Italy. Serum T4 and free thyroxine (FT4) levels were significantly lower in patients treated with CBZ and CBZ plus VPA than in controls, but were normal with VPA monotherapy. Serum T3 and FT3 levels were unaffected, and TSH levels were normal in all patients. Thyrotropin responses to thyrotropin-releasing hormone were similar in drug-treated and control groups, suggesting that hypothalamic function is unaffected. Serum thyroid hormone levels were not significantly correlated with serum AED concentrations. (Verrotti A, Basciani F, Morresi S et al. Thyroid hormones in epileptic children receiving carbamazepine and valproic acid. Pediatr Neurol July 2001;25:43-46). (Respond: Dr Alberto Verrotti, Department of Medicine, Section of Pediatrics, University of Chieti-Ospedale Policlinico, Via dei Vestini 5, 66100 Chieti, Italy).

COMMENT. As in previous studies in young adults, children with epilepsy treated with CBZ have decreased serum levels of T4 and FT4 and subclinical hypothyroidism, whereas T3, FT3, and TSH are unaffected. Valproate monotherapy causes no alteration in thyroid hormone levels. Previous studies in adults also showed that phenytoin causes decreased T4 and FT4 levels (see Progress in Pediatric Neurology I, PNB Publ, 1991;pp126-7). Thyroid supplements are usually not indicated in AED-induced reductions in T4 and FT4, unless signs of clinical hypothyroidism are present.

## **HORMONE PROFILES WITH VALPROATE MONOTHERAPY**

Androgen, insulin, and lipid profiles were compared in young women and men treated with valproate (VPA) monotherapy and matched with controls taking lamotrigine (LTG), in a study at Western Infirmary, Glasgow, Scotland. Four obese VPA-treated women were hyperinsulinemic ( $P=0.05$ ); 3 had abnormal menstrual cycles and 1 a raised testosterone level. Obese patients of both sexes and VPA-treated men had elevated insulin levels. Testosterone and triglyceride levels were higher in VPA-treated women compared with those taking LTG. Only a minority of obese VPA-treated females had polycystic ovarian syndrome. (Stephen LJ, Kwan P, Shapiro D, Dominiczak M, Brodie MJ. Hormone profiles in young adults with epilepsy treated with sodium valproate or lamotrigine monotherapy. Epilepsia August 2001;42:1002-1006). (Reprints: Dr MJ Brodie, Epilepsy Unit, Department of Medicine and Therapeutics, Western Infirmary, Glasgow G11 6NT, Scotland).

COMMENT. VPA therapy may cause a subclinical hyperinsulinemia in patients of either sex. In women, testosterone and triglycerides may also be elevated, indicative of polycystic ovarian syndrome. Women with obesity and a history of menstrual irregularities should receive a biochemical hormone screen. Those with abnormal chemistries should be advised to lose weight and avoid treatment with VPA.

## **NEUROMUSCULAR DISORDERS**

### **BELL'S PALSY AND REVIEW OF STEROID THERAPY**

The effect of corticosteroids in the treatment of Bell's palsy in children (<16 years old) was evaluated by review of published trials and reported from the Hospital for Sick Children, Toronto, Canada. Of a total of 3392 reports identified, 8