Cystinosis and vitamin D

Sir,

Katzir et al reported a case of nephrogenic diabetes insipidus, cystinosis, and an abnormality of vitamin D metabolism. The idea that nephrogenic diabetes insipidus might herald cystinosis is interesting. Their analysis of the serum vitamin D metabolite concentrations on the patient, however, should not be regarded as a feature of the described association but rather part of the natural course of cystinosis. In 1983 Steinherz et al reported on the circulating vitamin D metabolites in nephropathic cystinosis. In this study, 10 cystinotic patients with various degrees of functional renal impairment were screened for their vitamin D metabolites. The mean (SD) concentrations of 24,25 dihydroxyvitamin D₃ (24,25(OH)₂D₃) were reduced in those patients treated with low dose of ergocalciferol (<25 µg) but within the normal range in the patients who received above 625 µg vitamin D₂: 0.75 (0.5) and 6.5 (2.8) nmol/l respectively, while normal concentrations were 4.3 (1.3). These reduced 24,25(OH)₂D₃ concentrations have previously been found in children with uraemia. (Among these patients there were three cases of cystinosis.)

Serum 1,25 dihydroxy vitamin D₃ (1,25(OH)₂D₃) concentration depended upon the therapeutic agent used in patients. On either low or high vitamin D supplementation, 1,25(OH)₂D₃ was below the normal concentrations (25(20) and 5(20) compared with 108(30)pmol/l). Treatment with calcitriol and dihydroachysterol significantly increased 1,25(OH)₂D₃ above normal concentrations: 190(40) and 900(513) compared with 108(30)pmol/l.

The conclusion of our report on cystinotic patients was in accord with that of Chesney et al that circulating values of 24,25(OH)₂D₃ were reduced in relation to the renal parenchymal damage. The low 1,25(OH)₂D₃ concentrations could reflect (as also stated by Katzir et al) a renal phosphate leak with impairment of synthesis of 1,25(OH)₂D₃ besides its correlation with renal insufficiency associated with intrarenal cystine accumulation.

References

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Atopic eczema and preterm birth

Sir,

We noted with great interest the report stating that preterm infants are at decreased risk of suffering from atopic eczema, and attempted to confirm this finding using data from a well known data source, the Collaborative Perinatal Project. This project was a prospective study of pregnancy and child development that from 1959 to 1966 enrolled approximately 55 000 pregnancies at 12 centres in the United States. The recruitment and follow up procedures have been described. When the subjects were 1 year old, study physicians completed a diagnostic summary form that included a code for eczema. Infant gestational age was determined from the date of the mother's last menstrual period. Children whose birth weight was grossly incompatible with their gestational age were eliminated.

There were 44 793 children who survived the first year and for whom the presence or absence of eczema was known. Four thousand and eighty nine (9.1%) of these children were born after less than 37 completed weeks' gestation. Eczema was slightly less common among preterm infants: 1.5% of preterms had eczema compared with