Letters to the Editor

Sir,

Could Urine Calcium be a Marker of Vitamin D Metabolism Parallel to the Changes in Climate

In Anatolia the incidence of rickets is 4–5 per cent. In such communities where the incidence is so high supplementary vitamin D preparations are often given.[1] Misuse of parenteral vitamin D causes intoxication in infants which is seen frequently when the preparations were used without prescriptions, or incorrect dose was given, or long-term use.[2]

Due to the geographical location, rickets is not common in children born and growing up in Cyprus.[3]

We report a study undertaken to assess whether urine calcium level is a reflection of vitamin D metabolism for the prophylaxis of rickets and hypervitaminosis D in children who have migrated into Cyprus from regions receiving inadequate sunlight.

The first group included native infants of Cyprus, the second group consisted of infants who came to the island from Anatolia 1 year ago, and the third group included infants who had just come to the island from Northern Anatolia. Each group comprised 30 cases. Daily calcium excretion in urine and serum calcitriol of each subject were determined in the last week of June and in September when all the children were living in Northern Cyprus. In the first, second, and third groups, mean levels of calciuria in June were 2.91 ± 0.71, 2.88 ± 0.75, and 2.21 ± 0.74 mg/kg/day, and mean levels of serum calcitriol in June 35.43 ± 5.16, 34.80 ± 4.14, and 28.36 ± 2.72 pg/ml, respectively; mean levels of calciuria in September were 3.11 ± 0.41, 2.95 ± 0.66, and 2.82 ± 0.65 mg/kg/day, and mean levels of serum calcitriol in September 34.76 ± 4.85, 35.03 ± 3.97, and 34.80 ± 4.14 pg/ml, respectively. In the third group, the level of calciuria and serum calcitriol were significantly lower compared to the other groups ($P < 0.01$) in June, but there were no significant differences compared to the other groups in September. However, in the third group, the levels of calciuria and serum calcitriol in September was significantly higher than those in June, but in the other groups there were no significant differences between the level of calciuria and serum calcitriol between September and June.

As a result, we conclude that in children who migrate to warmer climates, high calciuria levels occur concomitantly with increased vitamin D synthesis by means of sunlight and hypercalciuria does not occur. This is explained by vitamin D formed only by sunlight not causing hypervitaminosis.

It is recommended that children who come to Cyprus with similar migration background should have their diet reviewed and vitamin D supplements discontinued after their arrival. Calcium levels in urine provide a simple means of monitoring in longitudinal follow up.

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References

1. Özsoylu Ş. Pediatride Yenilikler, Ankara. Türkiye Sağlık ve Tedavi Vakfı Yayınları 1982; 149–78.
2. Misselwitz J, Hesse V, Markestad T. Nephrocalsinosis, hypercalciuria and elevated serum levels of 1,25-dihydroxyvitamin D in children. Possible link to vitamin D toxicity. Acta Pediat Scand 1990; 79: 637–43
3. Weather reports, Department of Meteorology, Republic of Turkey 1989–1990.

Sir,

Acute Acalculous Cholecystitis in Typhoid Fever

With the emergence of multidrug-resistant *Salmonella typhi* infection, more severe and uncommon clinical manifestations have been reported recently from different parts of the country.[1–3] Acute acalculous cholecystitis (AAC) is one such rare presentation in paediatric practice.[4] These patients tend to run a protracted course with toxaemia, and early diagnosis and treatment given in the course of illness are of immense help. We are reporting our experience on three cases of AAC caused by multidrug resistant *Salmonella typhi*, responding to conservative therapy.

All the three children presented with fever (101–104°F) of more than 1 week duration, abdominal pain, and vomiting at diagnosis. Two patients had associated diarrhoea and paralytic ileus. On examination, they had toxic look, positive Murphy's sign, hepatomegaly, splenomegaly, and a gall bladder lump. The gall bladder lump was globular, soft, tender, and the size ranged between 4 and 7 cm below the right costal margin in its axis. The rest of the general physical and systemic examinations were normal. Investigation showed positive Widal test (*Salmonella typhi* O titre > 1:160) and blood culture grew *S. typhi* in all the three cases. The isolates were resistant to chloramphenicol, ampicillin and trimethoprim, and sensitive to gentamicin, cefotaxime, ceftriaxone, and ciprofloxacin. Serum bilirubin, SGPT, SGOT, and alkaline phosphatase levels were normal. Ultrasound scan of abdomen revealed enlarged distended gall bladder with oedematous wall, sludge in the lumen, and absence of calculi in all the patients. The rest of the hepatobiliary scan was normal.

The patients were treated with intravenous ceftriax-

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