CLINICAL SNAPSHOT

Symptomatic Hypocalcemia in a Male Adolescent

A 17-year-old male of normal weight presented for investigation of retarded growth (153 cm). Ever since grade school he had felt a tingling in the extremities during sporting activity. He showed an adult puberty status with a stocky build and brachydactyly. Radiography detected brachymetacarpia of the fourth ray. On 12-lead ECG there was marked lengthening of the QTc time to 499 ms (*Figure*), and clinical chemistry showed decreased serum calcium (total 1.4 [normal range 2.0 to 2.7]; ionized 0.7 [1.12 to 1.32] mmol/L). His serum concentrations of parathormone (204 ng/L, normal range 12 to 65) and phosphate were elevated, while vitamin D, magnesium, and parameters of kidney function were normal. We diagnosed pseudohypoparathyroidism as the result of congenital renal resistance to parathormone (estimated prevalence 1:100 000). Patients with this condition often have Albright hereditary osteodystrophy (retarded growth, brachydactyly, stocky build), as found in our case. The calcium concentration and QTc time were restored to normal (QTc time 429 ms) by 8 weeks' treatment with gradually increasing doses of calcitriol and calcium. On this long-term treatment, for the first time in his life the patient experienced no tingling (as an advance sign of hypocalcemic tetany) when he exercised.

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