progenitor cells with exaggerated cyclic oscillations in the rate of bone marrow production.

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Hypokalemic Muscle Paralysis

Dandge *et al*.(l) report the case of an 11-year-old boy with recurrent attacks of hypokalemic muscle paralysis since 3_k years of age. The patient had marked failure to thrive with weight less than the third percentile for the age. The serum potassium levels were very low ranging from 1.7-2.2 mEq/L. However, a diagnosis of primary hypokalemic periodic paralysis, an extremely rare condition, in this patient raises some concerns.

Firstly, before making this diagnosis other causes of hypokalemic paralysis must be carefully excluded. Episodic hypokalemia starting early in life is an important feature of renal tubular acidosis (RTA)(2). Recurrent epidoses of hypokalemia may also occur in hyperaldosteronism, hyperthyroidism, Bartter's syndrome and villous adenoma of the colon. In all of the latter conditions systemic acidosis is absent(3). The diagnosis of hypokalemic periodic paralysis is one of exclusion, and most patients with this condition have a family history of a similar disorder. The usual age of onset in more than 90% cases is between 7 and 21 years and onset of symptoms before 5 years of age is most unusual(4).

This patient at admission had a blood pH of 7.34 and bicarbonate level of 14.6 mEq/L. In the presence of failure to thrive and episodic hypokalemia since early childhood, these values are highly suggestive of distal RTA. An accurate measurement of the early morning urinary pH and following oral administration of ammonium chloride was essential in this patient. The presence of an inappropriately alkaline urine (pH more than 6) in patients with systemic

acidosis suggests the diagnosis of RTA. Measurement of the urinary anion gap is also considered to be an important screening test in evaluation of patients with metabolic acidosis(5). The authors have not excluded *other* causes of hypokalemia, chiefly RTA, in this case and therefore diagnosis of primary hypokalemic periodic paralysis is doubtful.

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