甲狀腺毒性低血鉀陣發性麻痺的臨床表現

Clinical manifestation of thyrotoxic hypokalemic periodic paralysis

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Thyrotoxic hypokalemic periodic paralysis (THPP), while relatively rare among Caucasians, occurs more frequently in hyperthyroid patients of oriental origin ranging from 1.9% to 8.8%. Intracellular shifts of potassium are thought to be responsible for the neuromuscular symptoms that are the hallmark of this disorder.

We reviewed emergency medical records of 33 patients with THPP from July of 1979 to June of 1999. The diagnosis was based on paralysis episode, electrolyte finding, and thyroid function test.

There were 32 males and 1 female, aged from 16 to 46 years (mean, 31±7 years). Twenty-seven patients had weakness in both extremities, and 6 had weakness in the lower extremities. Deep tendon reflexes were typically absent or markedly diminished, but might remain brisk. Thirty-one patients had onset of paralysis between 1 and 6 AM, and 20 patients between May and August. All patients had low serum potassium levels and were hyperthyroid. All patients had low serum potassium levels ranging from 1.6 to 3 mmol/L. Twelve patients (36%) had elevated serum creatine phosphokinase values ranging from 185 to 394 U/L. All patients had elevated T3 ranging from 171 to 638 ng/dl, elevated T4 ranging from 13.7 to 22.6 ug/dl, elevated free T4 ranging from 2 to 6 ng/dl, and decreasing TSH ranging from 0.01 to 0.25 mIU/L.

The diagnosis of THPP at the initial attack is often delayed and confused with other more familiar causes of lower extremity paralysis, partly because of the subtleness of the thyrotoxicosis and partly because of an unfamiliarity with this disorder by emergency physicians. Acute hypokalemic paralysis is a rare but treatable cause of acute systemic weakness that resolves when a euthyroid state is achieved. Therefore, it is imperative for physicians working in emergency department to be aware of this disorder.