Abstract

Hypokalaemic periodic paralysis (HPP) is a rare disease. The commonest aetiologies include a heritable disorder transmitted in an autosomal dominant manner, HPP associated with thyrotoxicosis and renal tubular acidosis. Since the treatment of each of this underlying cause is different, careful evaluation of the patient is essential to arrive at the correct diagnosis.

We report the case history of a patient who presented with hypokalaemic periodic paralysis in the background of thyrotoxicosis and distal renal tubular acidosis (RTA-1). The unique feature in this case was the initial presentation with alkalosis which was attributed to the hyperventilation and concurrent recurrent vomiting. RTA-1 was confirmed with ammonium chloride loading test. With anti- thyroid therapy and potassium citrate, biochemical abnormalities were normalized.

The underlying pathophysiology of hypokalaemia in RTA-1 and thyrotoxicosis are different and both conditions are likely to have contributed to the clinical presentation in this patient. Correction of hypokalaemia is not recommended in thyrotoxic HPP since potassium redistribution is the underlying cause. In RTA -1 correction of both hypokalaemia and acidosis must be done, since the underlying pathology is urinary potassium wasting and failure to acidify urine. Therefore, assessment of the acid-base status of patients presenting with severe hypokalaemia is of paramount importance for the accurate diagnosis and administration of proper treatment.