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Dyselectrolytemia in an infant: An unusual presentation of an underdiagnosed problem

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Abstract

Introduction

Milk protein intolerance (MPI) is an under-diagnosed entity with a variety of presentations. There is not much published evidence that links MPI with renal manifestations in infants. We report the first case report of an infant with MPI with an unusual renal presentation.

Case description

A 7 weeks old baby girl referred to our centre with 1-week history of prior hospitalisation, with persistent diarrhea, severe hypernatremic dehydration, hyperkalemia, metabolic acidosis and failure to thrive. Dyselectrolytemia was corrected as per protocol. A positive Elimination test followed by gradual milk challenge, supported by hematological evidence of chronic inflammation, led to a clinical diagnosis of MPI. With initiation of partial parenteral nutrition and gradual cyclical feeding, gut losses were controlled. In view of persistence of hyperchloremic metabolic acidosis, hyperkalemia, polyuria and a positive urine anion gap, child was investigated for type 4 RTA. Increased urinary potassium level with inappropriately low trans-tubular potassium gradient (TTKG) suggested aldosterone deficiency/ resistance. With this background, serum Aldosterone level and Plasma Renin activity were sent, both of which were elevated, suggesting the possibility of Pseudohypoaldosteronism. Type 4 RTA is not a described association of MPI. Here the possibility of Pseudohypoaldosteronism was both unusual and difficult to explain, since the child presented with severe hypernatremia and after correction, remained eunatremic during the entire stay. Though iatrogenic hypernatremia is a possible explanation, this seemingly fallacious feature presents with a diagnostic dilemma and calls for further investigation and follow up to learn the natural progression. An infant with MPI, failing to thrive with persistent hyperchloremic acidosis, should be worked up for underlying renal tubulopathy

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Biography

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