

A case report: Diabetic ketoacidosis with extreme hyponatremia in a 13-year-old girl

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Abstract

Introduction: The most common sodium change observed in diabetic ketoacidosis (DKA) is hyponatremia with corrected sodium being in the eunatremic range. Although mild hyponatremia can be seen in 30% of patients presenting with DKA, extremely severe hyponatremia in the range of 190mEq/L in DKA has been reported very rarely. We present a case of severe DKA in a 13-year-old girl with serum sodium of 193mEq/L with intact neurological recovery.

Case Report: A 13-year-old girl admitted with altered mental status, known case of type I diabetes mellitus and diabetic ketoacidosis (DKA) had a rapid rise in serum sodium from 155mEq/L (corrected sodium 162mEq/L) at the admission to 193mEq/L within 36 hours of admission despite standard fluid and insulin therapy recommended for the treatment of DKA. The patient was in shock. During her illness, renal functions and GCS further deteriorated. The child was kept on non-invasive ventilation with continuous monitoring of vitals and urine output, started on insulin infusion, careful fluid titration to bring down the sodium and glucose gradually and maintain tissue perfusion. She had a prolonged Intensive Care Unit and hospital stay but recovered completely without any neurological sequelae.

Extreme hyponatremia is a catastrophic condition that is known to be associated with death or severe neurological sequelae in survivors. The intact neurological survival was probably related to the very gradual reduction in serum sodium to normal levels over almost 7 days using a pathophysiological-based fluid management.

Speaker Publications:

1. "Diabetic ketoacidosis with extreme hyponatremia in a 13-year-old girl"; Asia Pacific Journal of Pediatrics and Child Health/ V (15), 2019.

[33rd World Pediatrics Conference](#); Webinar- August 20-21, 2020.

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Biography:

Vandana Yadav is working as a pediatrician at Rajindra Hospital, India. She is very much interested in the fields of pediatrics.