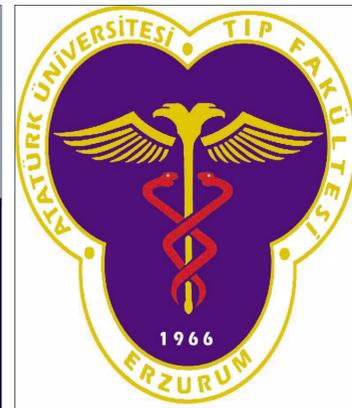




SEVERE HYPONATRAEMIA WITH ABSENCE OF HYPERKALAEMIA IN A PATIENT WITH ADDISON'S DISEASE

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INTRODUCTION

Autoimmunity of the adrenal gland, also known as Addison's disease, is characterised by cell mediated immune destruction of the adrenal cortex. We present a child with Addison's disease who has severe hyponatraemia and normokalemia, which led to an inappropriately low index of suspicion initially at presentation.

CASE

A 12-year-old boy diagnosed with adrenal deficiency was admitted to hospital with 2 weeks of vomiting, fatigue and weight loss. He has been taking hydrocortisone therapy. Serum electrolytes obtained 6 months prior to presentation were normal, except for mild hyponatraemia at 129 mmol/L, which dropped to 117 mmol/L on admission. He had normal serum potassium, low-serum osmolality, elevated urine sodium and osmolality, low serum aldosterone, and high plasma renin levels. 21-hydroxylase antibody in serum was positive. Addison's disease was diagnosed on the basis of gingival hyperpigmentation and undetectable cortisol on adrenocorticotrophic hormone stimulation test. He rapidly responded to stress dose hydrocortisone, followed by hydrocortisone, fludrocortisone, and salt therapy.

CONCLUSION

The absence of hyperkalemia in the presence of severe hyponatraemia cannot rule out Addison's disease in children. In this situation urine sodium, serum aldosterone, and plasma renin levels were examined.

