Acute hypokalaemic paralysis in pregnancy- A Case Report

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Background

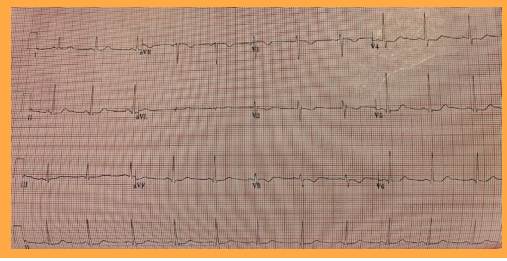
Hypokalaemic paralysis is rare in pregnancy but potentially life-threatening. Cases have been reported in the context of hyperaldosteronism, steroid administration, the glucose tolerance test (GGT), thyrotoxicosis, renal tubular disorders and familial periodic paralysis syndromes. We present a case of hypokalaemia paralysis in pregnancy secondary to vomiting.

Case

A 31-year-old multiparous woman, 29 weeks pregnant, presented with a one-day history of bilateral weakness of the hands and wrists, preceded by 24 hours of vomiting. There was no personal or family history of periodic paralysis, renal disease, or exposure to other precipitants.

Observations were normal and there was bilateral flaccid paralysis of the hands and wrists. The remaining neurological examination was normal. Venous blood gas showed a pH of 7.46 and potassium of 2.1mmol/L. ECG showed ST depression (see Image 1).

Image 1: ECG with signs of hypokalaemia



Medical review, continuous telemetry and intravenous potassium replacement were commenced. Within 6 hours the paralysis resolved. Investigations including thyroid function, urinary potassium and cortisol level were normal. After 3 days, potassium level stabilised and the patient was discharged. She remained on oral supplementation and delivered a 4.2kg baby at 39 weeks vaginally. At 6 weeks post-partum she had a normal potassium level.

Discussion

Myopathy can be a manifestation of hypokalaemia. Severe hypokalaemia can lead to respiratory depression and potentially lethal arrythmias, therefore rapid detection and treatment is essential. The differential diagnosis of hypokalaemia in pregnancy is similar to the non-pregnant population and treatment relies on correcting the underlying cause. In the setting of vomiting, hypokalaemia results from increased urinary losses and is reversed through parenteral replacement. While not evident in the above case, certain causes of hypokalaemia in pregnancy, such as familial hypokalaemic periodic paralysis, can affect delivery planning as labour itself can trigger acute hypokalaemia, requiring strategies like epidural and instrumental delivery to avoid adverse maternal outcomes.

References:
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