

# Pseudohypoaldosteronism – Subtle presentations with critical electrolyte imbalances Experiences from one hospital

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## Introduction

Secondary pseudohypoaldosteronism presents with salt loss and hyperkalemia due to a transient aldosterone resistance.

In both the cases illustrated the presentation was subtle. Secondary pseudohypoaldosteronism was discovered by chance whilst the infant was showing cardiac manifestations of hyperkalemia.

We recommend an initial check of urea and electrolytes in all infants with UTI, dehydration and failure to thrive.

## Case 1

A 5 month old presented with a one day history of poor feeding and two episodes of vomiting.

He was afebrile with normal observations. His urine examination showed UTI and he was to be sent home on oral antibiotics.

Before discharge he had a further episode of vomiting and a decision was made to start IV antibiotics.

An incidental gas showed a sodium of 124mEq/L and a potassium of 8.6mEq/L.

His ECG showed tall tented T waves.

His aldosterone level was 2500pmol/l with a renin of 19nmol/l/hour, cortisol of 1500nmol/l and a normal 17OHP level.

Investigations revealed UTI, bilateral hydronephrosis and posterior urethral valves.

All electrolyte abnormalities resolved with resolution of infection.

## Case 2

An 8 week old presented with a history of vomiting and diarrhoea.

He was clinically dehydrated with a sodium of 110mEq/L and a potassium of 8mEq/L.

Electrolytes normalised after 40 hours of rehydration.

His aldosterone was markedly raised at 47000pmol/l and renin was 102nmol/l/hour. His 17OHP was within the normal range and his cortisol was 1400nmol/l.

Investigations showed UTI and bilateral hydronephrosis. His electrolyte abnormalities resolved with resolution of the infection.

## Conclusions

In both cases secondary pseudohypoaldosteronism was discovered by chance.

We recommend that all children presenting with hyperkalemia and salt loss should be evaluated by renal ultrasound and urine culture.

Finally these are good examples that the hormonal change is transient and can be corrected when the obstruction is relieved and infection is controlled.

