

# Can Liquorice Kill?

Laura Perry<sup>1</sup>  
I. Royal Hobart Hospital



## Out Of Hospital Cardiac Arrest (OOHCA) due to Chronic Excess Liquorice Consumption



A 75-year-old male with a short history of diarrhoea was found unresponsive in bed.

On paramedic arrival he had a Glasgow-Coma-Scale score of 3 with pulseless electrical activity.

After swift paramedic intervention spontaneous circulation was recovered and patient intubated.

On arrival to hospital **serum potassium measured 1.8mmol/L** with elevated urinary potassium.

The patient required **400mmol of intravenous potassium** to achieve a safe level of 4.0mmol/L, signalling chronic intra- and extra-cellular depletion.

**It was later discovered that the patient had been consuming half a bag (100-150g) of liquorice per day for six months.**

Liquorice contains **glycyrrhizic acid** which is known to rarely cause **significant hypokalaemia** and mimic primary hyperaldosteronism.

Glycyrrhizic acid inhibits 11 $\beta$ -hydroxysteroid dehydrogenase which converts cortisol to the less potent cortisone, resulting in mineralocorticoid excess, hypertension and hypokalaemia.

**Cessation of liquorice consumption is the only treatment required in addition to supportive care and electrolyte replacement.**

The clinical pharmacist reviewed the patients medicines noting **regular indapamide and salt tablets**, potentially contributing to the profound hypokalaemia.

Given the patients **history of schizophrenia and fixation on foods** it was thought best to **remove all contributing factors**.

On suggestion of from the clinical pharmacist these **medications were ceased**.

The patient suffered a hypoxic brain injury due to the OOHCA and required an extended stay on the rehabilitation unit.

**The patient was advised to cease liquorice consumption.**

## Pharmacy Specific Learnings

**Lifestyle factors** can often be missed during history taking. It is important to gain as much collateral as possible, **particularly in peculiar cases**.

The Pharmacists role in holistically reviewing a patient and their medicines is pertinent to **reduce contributing factors** to prevent further incidence.

## Author details

Royal Hobart Hospital Pharmacy Department

Laura Perry, A/Clinical Pharmacy Manager, [laura.perry@ths.tas.gov.au](mailto:laura.perry@ths.tas.gov.au)