

Depression and acute kidney injury (AKI) - Unusual presentation of Addison's disease (AD).

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Introduction:

- Addison's disease is the commonest cause of primary hypoadrenalism in the western world.
- The presenting features may not always be typical of the disease.
- Here, we report an unusual case of Addison's disease presenting with depression and severe AKI.

Case Presentation:

- A 39 year old woman with no previous mental health problems was referred with history of severe weight loss (40 kg) and progressively worsening depression over the last 15 months following her divorce, in spite of regular anti-depressant for a year.
- She was cachectic and was profoundly hypotensive. No suggestion of any other systemic disease (e.g. TB). There was no palmar or buccal pigmentation. Her biochemistry is shown in Table 1.
- Autoimmune primary hypoadrenalism was confirmed by extremely low random serum cortisol, normal ACTH (post hydrocortisone sample) and positive anti-adrenal antibodies. IV Hydrocortisone and fluid replacement led to clinical (including depression) and biochemical improvement.
- Reported uncommon presentations of Addison's disease are summarised in Table 2.

Sodium	123mmol/L (NR: 133-146)
Potassium	6.1mmol/L (NR:3.5-5.5)
Creatinine	339 micromol/L(R:64-104)
Cortisol	3 nmol/L
ACTH	24.8ng/L (NR: 7 – 63)
Anti-adrenal Ab	positive
TFTs	Subclinical hypothyroidism
Prolactin	811 mu/L (NR: 71-566)
Random glucose	2.8mmol/L
Adj.Calcium	2.95mmol/L(NR 2.20-2.60)
Aldosterone	<100pmol/L (NR:0-630)
Renin	15.7nmol/L/h(NR 0.3-2.2)

Table 1: blood tests on admission

Intractable hiccups	Myalgia and muscle contractures
Sciatica-like back pain	Anorexia nervosa
Hyperkalemic periodic paralysis	Unexplained abdominal symptoms
Recurrent hypoglycaemic episodes	Seizures with fever
Persistent abnormalities in transaminases	Psychiatric symptoms

Table 2: Rare presentations of Addison's reported in literature.

Discussion:

- Addison's patients presenting predominantly with psychiatric symptoms is rare.
- The aetiology of the neuropsychiatric symptoms remains unknown, but may involve electrophysiological, electrolyte and metabolic abnormalities, glucocorticoid deficiency, and altered endorphins.
- Severe AKI at presentation is rare although about 55% of patients do have a degree of azotaemia.
- The electrolyte abnormalities in Addison's disease could easily be attributed to AKI and hence a further delay in diagnosis, therefore physicians need to be vigilant.
- Low prevalence and atypical presentations make it imperative for clinicians to acquaint themselves with rare presentations of this disorder.