



AB219. Parathyroid crisis causing posterior reversible encephalopathy syndrome—a case report

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Background: Parathyroid crisis is a rare complication of untreated primary hyperparathyroidism. Severe cases can lead to marked central nervous system dysfunction.

Methods: We present the case of a 64-year-old female who presented to hospital with severe symptomatic primary hyperparathyroidism. Parathyroid hormone (PTH) was elevated at 1,330 ng/L (range, 10–68 ng/L) and serum calcium measured 4.83 mmol/L (range, 2.15–2.55 mmol/L). Technetium-99m-Sestamibi scan demonstrated a localised focus of radiotracer uptake consistent with a large right upper parathyroid adenoma or carcinoma. After commencing appropriate medical treatment, the patient developed status epilepticus necessitating intubation and intensive care unit (ICU) transfer. Magnetic resonance imaging of her brain revealed bilateral symmetrical T2 hyperintensities in the parietal and occipital lobes consistent

with posterior reversible encephalopathy syndrome (PRES). **Results:** Following stabilisation and aggressive medical treatment of her hypercalcaemia, the patient underwent a minimally invasive radio guided parathyroidectomy and right thyroid lobectomy. Pre-operative PTH measured 1,021 ng/L. The right upper parathyroid gland was markedly enlarged with significant retrosternal extension. Following excision, PTH fell to 10 ng/L. She was extubated in ICU on post-operative Day 1 and made an uneventful post-operative recovery. Histology confirmed a benign hypercellular parathyroid adenoma and normal right thyroid lobe. At the 6-week follow-up appointment, all her neurological symptoms had resolved.

Conclusions: PRES is a rare neurological entity characterized by seizures, headache, and reversible subcortical vasogenic oedema. Common aetiologies include hypertension, immunosuppression and renal failure. Hypercalcaemia induced PRES is exceedingly rare with only two previous case reports describing PRES secondary to primary hyperparathyroidism. Neurological manifestations of PRES almost always improve after treatment of the inciting factor.

Keywords: Primary hyperparathyroidism; parathyroid crisis; posterior reversible encephalopathy syndrome (PRES)

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