

Severe hypercalcemia due to the vitamin D intoxication presenting with acute renal failure

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Introduction:

Hypervitaminosis D is a rarely reported condition. It may be observed more frequently because of the recent increase in supplement use of vitamin D and should be included in the differential diagnosis of hypercalcemia (1). Herein, we report a case of vitamin D intoxication which was the first case with this high level of calcium as we searched the literature (2,3).

Case Report:

A 57-year old hypertensive woman admitted to our emergency room with symptoms of lethargy, pain in the abdomen, constipation, loss of appetite and confusion. Blood pressure, heart rate, and body temperature of the patient were 150/90 mmHg, 62 beats/min, and 36.6°C, respectively. No other systemic abnormalities were observed except dried mucous membranes and decreased skin turgor tonus. Routine chemistry revealed; glucose 98 mg/dL (70-100 mg/dL), urea 88 mg/dL (10 – 50 mg/dL), creatinine 3.4 mg/dL (0.6–1.3 mg/dL), total protein 7.0 g/dL (6.3-8.3 g/dL), albumin 3.8 g/dL (3.5-5.0 g/dL), serum calcium 22,7 mg/dL (8,4 – 10,2 mg/dL), serum phosphorus 2,5 mg/dL (2,3 – 4,7 mg/dL). Chest X-ray and the renal ultrasound was normal. Corrected QT was found 260 m/sec in electrocardiography.

The patient reported that she had been operated due to diagnosis of multinodular goiter and hypothyroidism and hypoparathyroidism had developed postsurgically. She admitted to the outpatient clinic of internal medicine in another hospital one month ago with a calcium value of 7.6 mg /dL. At the time of admission, she was taking calcium 4000 mg/d, cholecalciferol 3520 IU/d, calcitriol 0.5 mcg/d. Treatment was changed as calcium 6000 mg/d, cholecalciferol 5280 IU/d, calcitriol 1 mcg/d. She was on 125 µg L-thyroxine therapy with a thyroid stimulating hormone (TSH) level of 2.4 µIU/mL (0.35-4.94 µIU/mL).

The patient was hospitalized to our endocrinology clinic and taken to the low calcium hemodialysis. After hemodialysis, her calcium level decreased to 13.7 mg/dL. Then she was managed by continuous saline infusion and diuretics. The level of serum calcium, phosphorus and creatinine level was 8.5 mg/dL, 2.7 mg/dL, 1.1 mg/dL, respectively on the 8th day of treatment.

Conclusion:

Vitamin D supplementation should be appropriately monitored due to potential risk of intoxication.

References:

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