Colecalciferol

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Hypercalcaemia: case report

A 53-year-old woman developed hypercalcaemia following treatment with colecalciferol for vitamin D supplementation.

The woman with renal sarcoidosis, HIV and hepatitis C infections was hospitalised with generalised weakness, headache, lethargy and worsening excessive fatigue. Examination found generalised muscular weakness without focal signs, evidence of hypovolaemia and impaired general condition. Moderate proteinuria with a glomerular filtration rate of 40 mL/minute due to sarcoidosis were noted. Two weeks preceding admission, her serum $25(OH)D_3$ concentration was 18 ng/mL; accordingly, she was administered a single oral dose of colecalciferol 300.000 IU. On admission, tests revealed the following values: serum calcium 3.42 mmol/L, serum creatinine 299 ∝mol/L, serum phosphate 1.88 mmol/L, serum 1,25-dihydroxyvitamin D ($1,25(OH)_2D_3$) 119 pmol/l and serum $25(OH)D_3$ 52.4 ng/mL. These findings led to a diagnosis of severe hypercalcaemia traced back to the single colecalciferol dose.

Hydration was initiated, and the woman's serum calcium value gradually declined reaching 2.47 mmol/L with a creatinine value of 212 ∝mol/L. Her symptoms resolved within 6 days and she returned home. Her serum calcium level increased to 2.76 mmol/L, after 1 week; pamidronate was initiated with normalisation of serum calcium after a single dose. At follow-up, after 4 months, serum $25(OH)D_3$ and $1,25(OH)_2D_3$ values remained within the reference range.

Author comment: "*In conclusion, our case suggests a cautious use of vitamin D supplementation, especially of single high doses, as well as a close monitoring of its effects in patients with granulomatous diseases, even in the presence of glucocorticoids.*"

Hassler A, et al. Severe hypercalcemia after a single high dose of vitamin D in a patient with sarcoidosis. Rheumatology International 33: 2955-2956, No. 11, Nov 2013. Available from: URL: http://dx.doi.org/10.1007/s00296-012-2523-0 - Germany

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