

Low rate of compliance with ergocalciferol therapy in vitamin-D-deficient patients with hip fracture

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TO THE EDITOR: Large randomised trials have confirmed that treatment with cholecalciferol (vitamin D₃) and calcium reduces hip and non-vertebral fractures.^{1,2} In public health terms, calciferol compounds are cost-effective,³ simple to monitor and generally free of side effects. Ergocalciferol (vitamin D₂) is the only single prohormonal form of vitamin D available in Australia.⁴ As compliance rates for this medication have not, to our knowledge, been evaluated, we decided to conduct our own study of compliance.

At the Royal Perth Hospital, between June and September 2001, we identified 106 people with hip fracture who were vitamin D insufficient (defined as a serum 25-hydroxyvitamin D level < 50 nmol/L) and began treatment with ergocalciferol. Three months after discharge, we interviewed patients to determine whether they were complying with treatment and, if not, the reasons for non-compliance.

Of the 106 patients identified, 53 were interviewed (the remaining 53 patients were not contacted for various reasons: 38 did not live in the metropolitan region, eight had died, one refused interview and six were lost to follow-up). Of the patients interviewed, 33 (62%) had complied with therapy. Reasons for non-compliance among the remaining 20 (38%) are outlined in the Box.

The most common reason for non-compliance was poor communication between the hospital and the general practitioner. The second most common cause of non-compliance — failure to continue treatment on discharge or active cessation by the attending physician following discharge — indicates either that medical practitioners are ambivalent about the treatment of vitamin D deficiency or that patient-specific factors are at work. Ergocalciferol is not listed under the Pharmaceutical Benefits Scheme. It is available directly from pharmacy outlets without a prescription and the cost of treatment (currently about \$17.50/month for 60 × 1000 IU tablets) must be borne entirely by the patient. Thus, continuation of treatment is largely dependent on patient initiative, and, in our survey, cost may have

Reasons for non-compliance with vitamin D therapy

Reason	Number of patients
Not on discharge script from orthopaedic ward/ Reason for taking medication unknown by patient and/or carer	9
Stopped by general practitioner or doctor from another hospital/ Not continued after hospital supply used up	6
Patient refusing all medication/ Patient moribund	4
Side effects/ Intolerance of medication	1

been a disincentive to continue the medication once the hospital discharge supply was depleted.

Side effects of the medication were a very minor reason for non-compliance — only one patient out of 20 stopped therapy because of ergocalciferol intolerance.

Our audit had several limitations: the sample size was small, treatment was not blinded, and only patients living within the inner Perth metropolitan area were interviewed, which may have introduced bias.

Vitamin D deficiency remains a common and undertreated cause of osteoporotic hip fracture in elderly people, both in Australia and elsewhere.⁵ Our study suggests that the rate of non-compliance with ergocalciferol therapy is unacceptably high.

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