

tant to continue advocating periconceptual folic acid supplementation and sound nutrition.

Michiel C. Van den Hof
Vidia L. Persad
 Department of Obstetrics and
 Gynaecology
 Dalhousie University
 Halifax, NS

Reference

1. Persad VL, Van den Hof MC, Dube JM, Zimmer P. Incidence of open neural tube defects in Nova Scotia after folic acid fortification. *CMAJ* 2002;167(3):241-5.

Puzzling vitamin D results

I am puzzled by the seasonal mean values for 1,25-dihydroxy vitamin D [1,25-(OH)₂D] published in Table 2 of the article by Diana Rucker and colleagues.¹ They are about twice as high as those from a similar study done in Denmark,² which showed a mean of 29 pg/ml (75.4 pmol/L).

Two of the seasonal mean values (168.1, 148.9) are above the normal range quoted for the assay (45–145). This assay range seems to be correct, but the study data seem to be high.

I am particularly concerned that this study did not place much greater emphasis on the values of the active hormone 1,25-(OH)₂D than on the intermediate metabolite 25-hydroxy vitamin D [25(OH)D]. This is especially important in elderly populations, as extrarenal hydroxylase activity in inflammatory macrophages has been shown to generate a normal 1,25-(OH)₂D value from depressed levels of circulating 25(OH)D.

Trevor G. Marshall
 Research Director
 Yarc Inc.
 Thousand Oaks, Calif.

References

1. Rucker D, Allan JA, Fick GH, Hanley DA. Vitamin D insufficiency in a population of healthy western Canadians. *CMAJ* 2002;166(12):1517-24.
2. Brot C, Jorgensen NR, Sorensen OH. The influence of smoking on vitamin D status and calcium metabolism. *Eur J Clin Nutr* 1999;53(12):920-6.

[One of the authors responds:]

I thank Trevor Marshall for paying such close attention to our article,¹ and I wish I had done the same in my proofreading. The normal range for the 1,25-(OH)₂D, or calcitriol, assay published in our paper was incorrect and was that for the earlier INCSTAR (later to become Diasorin) assay kit for calcitriol. This assay was in use at the Foothills Medical Centre when I submitted my grant proposal for this project. However, the current Diasorin calcitriol assay kit is currently used, in both my laboratory and the Calgary Health Region clinical laboratory, and the normal range (2 standard deviations above and below the mean for a group of healthy hospital workers) is 55–190 pmol/L. This is the range we should have included in Table 2, and our reported 1,25-(OH)₂D levels were within it.

Our 1,25-(OH)₂D assay still provided results consistent with known vitamin D physiology. The 2 seasons with the highest mean levels of 1,25-(OH)₂D were associated with the highest mean levels of parathyroid hormone and the lowest mean levels of serum inorganic phosphate, both known stimuli to conversion of 25(OH)D to 1,25-(OH)₂D by renal 1 α -hydroxylase.

Although 1,25-(OH)₂D is the most biologically active form of vitamin D, it

is generally accepted that, when assessing patients' vitamin D stores, measurement of 25(OH)D in blood is much more clinically useful than that of 1,25-(OH)₂D.^{2,3} Serum 25(OH)D levels are consistently low in malabsorption syndromes and clinical osteomalacia, although 1,25-(OH)₂D levels may be normal or high.⁴ In osteomalacia due to vitamin D deficiency, the serum 25(OH)D level, not the 1,25-(OH)₂D level, correlates with the mineralization status of bone.⁵ Recent identification of 1 α -hydroxylase activity in nonrenal tissue provides a plausible explanation of how 25(OH)D may mediate vitamin D action at a cellular level,^{6,7} and evidence also exists of direct effects of 25(OH)D on calcium absorption.⁸

David A. Hanley
 Professor and Head
 Division of Endocrinology and
 Metabolism
 Department of Medicine
 University of Calgary
 Calgary, Alta.

References

1. Rucker D, Allan JA, Fick GH, Hanley DA. Vitamin D insufficiency in a population of healthy western Canadians. *CMAJ* 2002;166(12):1517-24.
2. Holick MF. The use and interpretation of assays for vitamin D and its metabolites. *J Nutr* 1990;120(Suppl 11):1464-9.
3. Vieth R. Vitamin D supplementation, 25-hydroxyvitamin D concentrations, and safety. *Am J Clin Nutr* 1999;69(5):842-56.

Submitting letters

Letters may be submitted via our Web site or by mail, courier, email (pubs@cma.ca) or fax. They should be no more than 250 words long and must be signed by all authors. Letters written in response to an article published in *CMAJ* must be submitted within 2 months of the article's publication date. Letters are subject to editing and abridgement.

eLetters

We encourage readers to submit letters to the editor via the eLetters service on our Web site (www.cmaj.ca). Our aim is to post by the next business day correspondence that contributes significantly to the topic under discussion. eLetters will be appended to the article in question in *eCMAJ* and will also be considered for print publication in *CMAJ*. To send an eLetter, click on the "Submit a response to this article" at the top right-hand side of any *eCMAJ* article.

4. Corazza GR, Di Sario A, Cecchetti L, Tarozzi C, Corrao G, Bernardi M, et al. Bone mass and metabolism in patients with celiac disease. *Gastroenterology* 1995;109(1):122-8.
5. Demiaux B, Arlot ME, Chapuy MC, Meunier PJ, Delmas PD. Serum osteocalcin is increased in patients with osteomalacia: correlations with biochemical and histomorphometric findings. *J Clin Endocrinol Metab* 1992;74(5):1146-51.
6. Zehnder D, Bland R, Williams MC, McNinch RW, Howie AJ, Stewart PM, et al. Extrarenal expression of 25-hydroxyvitamin D₃-1 α -hydroxylase. *J Clin Endocrinol Metab* 2001;86(2):888-94.
7. Segersten U, Correa P, Hewison M, Hellman P, Dralle H, Carling T, et al. 25-hydroxyvitamin D₃-1 α -hydroxylase expression in normal and pathological parathyroid glands. *J Clin Endocrinol Metab* 2002;87(6):2967-72.
8. Heaney RP, Barger-Lux MJ, Dowell MS, Chen TC, Holick MF. Calcium absorptive effects of vitamin D and its major metabolites. *J Clin Endocrinol Metab* 1997;82(12):4111-6.

Reducing antibiotic prescriptions

James Maskalyk highlights the importance of the judicious use of antibiotics in limiting the spread of antibiotic resistance.¹ Family practitioners in England and Wales have responded to concerns about the overuse of antibiotics by reducing their prescribing rates.² The number of antibiotic prescriptions issued by family practitioners decreased by 25% between 1995 and 2000, from 49.4 to 36.9 million prescriptions, corresponding to a fall from 1.00 to 0.75 antibiotic prescriptions per person per year. A more detailed data analysis from 210 family practices between 1994 and 1998 showed that antibiotic prescribing rates fell the most for children.² A similar decline in antibiotic prescribing for children has also occurred in the US and elsewhere.³ Falling rates for children may reflect the fact that many guidelines on antibiotic prescribing are for upper respiratory tract infections and ear infections.^{4,5}

In 1998, the Department of Health for England launched an initiative to reduce rates of antibiotic prescribing in community settings, but the change in prescribing practice predated the start

of the program.⁶ This suggests that family practitioners were already aware of the need to reduce antibiotic prescriptions and the limited effectiveness of antibiotics for many common infections. However, the government's initiative has helped to maintain the downward pressure on prescribing rates. This experience shows that doctors can have a significant impact in reducing antibiotic prescribing rates, particularly when they are supported by the government in achieving this objective.

Azeem Majeed

Professor of Primary Care
University College London
London, UK

References

1. Maskalyk J. Antimicrobial resistance takes another step forward. *CMAJ* 2002;167(4):375.
2. Wrigley T, Tinto A, Majeed A. Age- and sex-specific antibiotic prescribing patterns in general practice in England and Wales, 1994 to 1998. *Health Stat Q* 2002;14:14-20. Available: www.azmaj.org/PDF/Antibiotic.pdf (accessed 2002 Sept 17).
3. McCaig LF, Besser RE, Hughes JM. Trends in

antimicrobial prescribing rates for children and adolescents. *JAMA* 2002;287:3096-102.

4. Little P, Gould C, Williamson I, Moore M, Warner G, Dunleavy J. Pragmatic randomised controlled trial of two prescribing strategies for childhood acute otitis media. *BMJ* 2001;322:336-42.
5. Little PS, Williamson I. Controversies in management: Are antibiotics appropriate for sore throats? Costs outweigh the benefits. *BMJ* 1994;309:1010-2.
6. SMAC Sub-Group on Antimicrobial Resistance. The path of least resistance. London: Department of Health; 1998. Available: www.doh.gov.uk/smac1.htm (accessed 2002 Sept 17).

Correction

In a recent *CMAJ* article,¹ the normal range provided for serum 1,25-dihydroxy vitamin D levels on Table 2 (page 1519) is incorrect. The normal range for the Diasorin calcitriol assay kit, as used in this study, is 55–190 pmol/L.

Reference

1. Rucker D, Allan JA, Fick GH, Hanley DA. Vitamin D insufficiency in a population of healthy western Canadians. *CMAJ* 2002;166(12):1517-24.

Pour écrire à la rédaction

On peut envoyer une lettre à la rédaction par notre site web, par la poste, par messenger, par courriel (pubs@cma.ca) ou par télécopieur. Les lettres doivent compter au plus 250 mots et être signées par tous les auteurs. Les lettres se rapportant à un article publié dans le *JAMC* doivent nous parvenir dans les 2 mois de la publication de l'article en question. Le *JAMC* ne correspond qu'avec les auteurs des lettres acceptées pour publication. Les lettres acceptées seront révisées et pourront être raccourcies.

Cyberlettres

Nous encourageons les lecteurs à écrire à la rédaction par le service Cyberlettres de notre site web (www.jamc.ca). Nous visons à publier au plus tard le jour ouvrable suivant les lettres qui apportent une contribution importante à la discussion. Les lettres électroniques seront annexées à l'article pertinent du *JAMCél* et on pourra les publier dans la version imprimée du *JAMC*. Pour envoyer une lettre électronique (cyberlettre), cliquez sur «Lettres électroniques : répondre à cet article» à la droite du texte HTML de tout article du *JAMCél*.