Letters to the editor

OVERVIEW

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Vitamin D – what is normal according to latest research and how should we deal with it?

Editor – This interesting article summarised the public health concern presented by vitamin D deficiency. The observational data that links vitamin D deficiency to many chronic diseases demonstrates a potential impact extending far beyond traditionally recognised endocrine effects on bone health. The benefits of vitamin D supplementation, in the absence of randomised controlled trial data, are currently yet to be fully defined.

The author advocates 'a targeted, rather than population-based screening approach to vitamin D testing', but adds that 'empirical supplementation of at risk groups should be considered'.[1] Any strategy that includes blanket vitamin D supplementation should be approached with caution: certain individuals in the population will have a genetic predisposition to vitamin D toxicity, unmasked only through higher vitamin D intake.

In the 1950s, routine supplementation of formula milk products with vitamin D_3, in an effort to prevent rickets, led to a sudden increase in infants presenting with idiopathic infantile hypercalcaemia, in some cases proving fatal.[2] Almost 60 years later, the discovery of loss-of-function mutations in *CYP24A1*, which encodes vitamin D 24-hydroxylase – an enzyme with a key role in vitamin D catabolism – finally linked these events.[3] Furthermore, an adult cohort who present with calcium-containing renal stones and nephrocalcinosis are recognised to carry *CYP24A1* mutations.[4] At present, the population frequency of *CYP24A1* variants has not been established.[5] The rarity of these presentations often leads to delayed diagnosis, a feature that will hopefully change with increased awareness and easier access to diagnostic testing.

As research into vitamin D supplementation expands, we must be careful to tailor our treatment towards each individual, and remember that Vitamin D supplements are not the answer for everyone. ■

Conflicts of interests

The author has no conflicts of interests.

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References

1 Gittoes NJL. Vitamin D - what is normal according to latest research and how should we deal with it? *Clin Med* 2016:171–4.
2 British Paediatric Association. Hypercalcaemia in infants and vitamin D. *BMJ* 1956;2:149.
3 Schlingmann KP, Kaufmann M, Weber S *et al.* Mutations in *CYP24A1* and idiopathic infantile hypercalcemia. *N Engl J Med* 2011;365:410–21.
4 Dinour D, Beckerman P, Ganon L *et al.* Loss-of-function mutations of *CYP24A1*, the vitamin D 24-hydroxylase gene, cause long-standing hypercalciuric nephrolithiasis and nephrocalcinosis. *J Urol* 2013;190:552–7.
5 Sayers J, Hynes AM, Rice SJ, Hogg P, Sayer JA. Searching for *CYP24A1* mutations in cohorts of patients with calcium nephrolithiasis. *OA Nephrology* 2013;1:1–6.

Viral arthritis

Editor – I am grateful to Marks and Marks[1] for their excellent overview of viral arthritis, which provided many useful clinical pointers. Viral arthritis acquired abroad will continue to increase in line with the ever-expanding number of travelers visiting or returning to the UK, especially from tropical climes.[2] As noted in the review, aetiology of viral arthritis includes alphaviruses such as Chikungunya and also flaviviruses such as Dengue. There is another topical flavivirus that is relevant for the generalist faced with a returned traveler with a fever, rash and arthralgia/arthritis: Zika.

Zika virus has been described as a 'new global health threat' for 2016.[3] While the majority of those infected with Zika will be asymptomatic, there are major concerns about a possible association between Zika infection in pregnant women and congenital microcephaly.[4] Twenty one cases of Zika have been diagnosed in the UK since April 2015 in travellers returning from affected countries (predominantly the Americas and the Caribbean).[5] Returning travellers presenting with a maculopapular rash and/or fever with at least one of the following symptoms (not explained by other medical conditions) meet the World Health Organization criteria of a suspected case: conjunctivitis, arthralgia, or arthritis.[6] Other symptoms may include itching/pruritus, headache, myalgia, lower back pain, and retro-orbital pain – all of which are compatible with a diagnosis of Dengue fever or Chikungunya.[5]

Public Health England provides comprehensive guidance on Zika virus infection, including a clinical algorithm of investigation of suspected cases and exposed pregnant women.[5] Management of people with Zika virus infection is supportive, with intravenous fluids if necessary and paracetamol for fever and arthralgia/arthritis. It should be noted that non-steroid anti-inflammatory agents are best avoided until the diagnosis of Dengue has been excluded, because of bleeding risk.

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