IPCRG practice driven answers on COVID-19 and respiratory questions

Does Vitamin D levels and its supplementation affect the risk of mortality or ICU admission from COVID-19?

What the research says

Several systematic reviews have suggested a trend for reduced risk of ICU admission and mortality among patients with COVID-19 infection with high plasma Vitamin D levels. However, the association is not clear and not statistically significant and may be related to other factors including gender and diabetes.

Current clinical guidelines either state there is insufficient evidence to recommend for or against the use of Vitamin D supplementation as an intervention to reduce the risk of ICU admission and mortality among patients with COVID-19 or recommend against its use outside of the clinical trial setting.

Nevertheless, considering the plausible chance for clinical benefit, more research is ongoing. There are currently 96 studies listed on ClinicalTrials.gov that are evaluating the role of Vitamin D in COVID-19 prevention, prognosis and treatment.

What this means for your clinical practice

- Advise against preventive high dose Vitamin D supplementation which has not been shown to reduce the risk of infection or more severe COVID-19 disease and may be associated with side effects
- Advise patients to maintain appropriate levels of Vitamin D through a diverse and nutritionally balanced diet or natural methods such as sunlight on the skin (with appropriate precautions against excess exposure)
- Vitamin D deficiency, and therefore its supplementation, may be considered according to National evidence and guidance, regardless of the pandemic context.

Useful links and supporting references

Australian Guidelines for the clinical care of people with COVID-19. Available at: https://app.magicapp.org/#/guideline/L4Q5An Accessed May 2021

Bassatne A, et al. The link between COVID-19 and Vitamin D (VIVID): A systematic review and meta-analysis. Metabolism 2021;119:154753. Available at: https://www.metabolismjournal.com/article/S0026-0495(21)00053-6/fulltext Accessed May 2021

Useful links and supporting references continued

National Institutes of Health. Coronavirus Disease 2019 (COVID-19) Treatment Guidelines. Available at: https://www.covid19treatmentguidelines.nih.gov/ Accessed May 2021

Siemieniuk R, et al. Update to living systematic review on drug treatments for covid-19. BMJ. 2021;370:m2980. Available at: https://www.bmj.com/content/370/bmj.m2980 Accessed May 2021

World Health Organization. Coronavirus disease (COVID-19). Frequently Asked Questions. Available at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/coronavirus-disease-answers?query=Vitamin+D&referrerPageUrl=https%3A%2F%2Fwww.who.int%2Femergencies%2Fdiseases%2Fnovel-coronavirus-2019%2Fcoronavirus-disease-answers Accessed May 2021

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