Guidelines for Preventing and Treating of Vitamin D Deficiency: an Ukrainian approach A.D. 2023

The published data document that vitamin D deficiency is common in Poland [1-5], but in Ukraine the 25(OH)D concentrations are higher. Nonetheless, there is a need to obtain and maintain proper 25(OH)D concentrations among general population and in the risk groups of deficiency. In Poland in 2009, 2013, 2018 and 2023 years the local guidelines were established and disseminated [6-9]. According to the most recent recommendations [9], the cholecalciferol was chosen as the first choice for both prophylactic and treatment options and calcifediol, i.e. 25(OH)D, should be used as the second choice, when cholecalciferol use does not improve serum 25(OH)D concentration or an immediate increase in serum 25(OH)D is required. In the general population and in the risks groups, the use of cholecalciferol should be individualized as well as use of calcifediol.

The cholecalciferol in dose of 1,000–2,000 IU/day was recommended for prevention in healthy adults aged 19–75 years and even higher doses (2,000–4,000 IU/day) were shown to be adequate for older and oldest olds persons aged 75–90 year old and 90 year and older. On the same calcifediol in daily dose of 10 µg (oral solution) as the alternative prevention was recommended if an acceptable serum 25(OH)D concentration could not be achieved, or if there was a reasonable medical indication and the serum 25(OH)D determination should be performed 6–8 days after starting supplementation.

The treatment is another issue. The 25(OH)D concentration value of ≤ 20 ng/mL reflects an urgent need to start the medical intervention regimen, with the use of cholecalciferol or, in special medical conditions (e.g. malnutrition syndromes, obesity, etc.) with the use of calcifediol. The therapy with the use of both medical regimens should last 1 to 3 months or until the serum 25(OH)D concentration of ≥ 30–50 ng/mL is achieved, then it is recommended to use consecutive maintenance dose i.e. a preventive dose recommended for the general population, in relation to age and body weight. For some patients with chronic diseases (obesity, malabsorption syndromes, liver diseases, chronic inflammatory diseases) or taking medications that interfere with hepatic cytochrome P450 (i.e. glucocorticoids, anticonvulsants, anticancer or antiretroviral drugs) or when a quick restoration of vitamin D deficiency is needed, for those patients, the optional use of calcifediol in therapeutic biweekly or monthly doses of 266 µg (soft capsules) was shown reasonable, safe, and justified. The therapeutic doses were 4,000 IU/day (100 µg/day) or equivalently in a cumulative dose once a week, once every two weeks, or once a month and a follow-up test of serum 25(OH)D concentrations should be performed after 8–12 weeks of treatment. For calcifediol therapy a dose of in a dose of 10 µg daily (oral solution) or 266 µg (soft capsules) taken biweekly or monthly were recommended and the first serum 25(OH)D concentration control assay not later than 6–8 days (oral solution) or 4–6 weeks (capsules) after starting treatment were both shown to be performed.

Concluding, the recommendations presented for Poland became an important tool to enable the wide medical community to understand the problem of global vitamin D deficiency, the principles of diagnosis, prevention and treatment of this deficiency, and the extensive health benefits obtained as a result of a proper vitamin D supply. I do hope that Ukrainian recommendations will provide the same tool for MDs dealing with vitamin D deficiency.

References


