

" Vitamin D status among patients of a tertiary health-care center in Makkah, Saudi Arabia: a retrospective study

Abstract:

Background: The prevalence of vitamin D deficiency has been reported to be quite high (30%–50%) in many areas of the world. Saudi Arabia is one of the sunniest areas of the globe and exposure to sunlight may maintain adequate vitamin D status. Yet studies performed as early as 1982 among the Saudi population pointed to the presence of a high prevalence of vitamin D deficiency. In the last 3 to 4 decades, the lifestyle and dietary habits of children and adults in Saudi Arabia have changed tremendously. **Objective:** To report the occurrence of vitamin D deficiency and assess the factors associated with it and to report the pattern of supplementation in a tertiary center in Makkah, Saudi Arabia.

Materials and Methods: Retrospective data collection was done for patients, for whom vitamin D serum level was assayed between May 2011 and December 2013. Patients were divided into two groups based on their vitamin D serum concentration using 30 ng/mL as the cutoff point. Demographic and clinical characteristics were analyzed to detect the association with vitamin D inadequacy. **Result:** Of the 594 patients included, more than 80% had inadequate vitamin D level at some point of time. The mean age was 44.59 ± 15.6 and 49.20 ± 16.48 years for groups with inadequate and adequate Vitamin D, respectively ($p = 0.006$). In the multivariate model and after adjusting for vitamin D supplementation status, only age and kidney disease were significantly associated with vitamin D status. The records did not show a clear pattern of vitamin D assay and follow-up in relation to the supplementation. **Conclusion:** This study makes it very clear that many patients without known risk factors may have inadequate vitamin D concentrations. This may call for wider screening for vitamin D status in the Saudi population. To optimize vitamin D assay and to make supplementation effective, guidelines for supplementation and follow-up need to be put in place.