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Acta Medica Iranica

2009;47(4) : 72-78

Original Article

Vitamin D Deficiency in Iran: A Multi-center Study among Different Urban Areas

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Abstract:

Background: Recent studies have reported different prevalence of vitamin D deficiency in different sex and age groups in developing countries. In the present survey, we elucidated the prevalence of vitamin D deficiency in a multi-center study among Iranian population.

Methods: In a random cluster sample of healthy men and women (ranged 20 to 69 years old), a number of 5232 subjects from five urban metropolitans' cities (Tehran, Tabriz, Mashhad, Shiraz and Booshehr) were recruited in 2001. Fasting blood sample was taken from participants and sent to the laboratory for measurement of 25-hydroxy vitamin D level. Meta-analysis was performed using fixed effect method for estimation of vitamin D deficiency prevalence in a national level.

Results: Moderate to severe vitamin D deficiency was estimated in urban areas (except for Booshehr because of its heterogeneity) equal to 47.2, 45.7 and 44.2% in age groups of <50, 50-60 and 60≤ years, respectively among men and 54.2, 41.2 and 37.5 percent among women in the same age groups. The highest prevalence of moderate to severe vitamin D deficiency in men was observed in Tehran. Mashhad and Booshehr had also the lowest prevalence of moderate to severe vitamin D deficiency among men and women.

Conclusion: Iran is a country with high prevalence of moderate to severe vitamin D deficiency and the prevalence of this deficiency is more evident in Tehran, capital of Iran. Therefore, consideration of main predictors for vitamin D deficiency in all age groups especially in Tehran is recommended.

Keywords:

Vitamin D . *Deficiency* . *Prevalence* . *Severity* . *Urban*

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