LETTER TO EDITOR

Vitamin D Deficiency in Pakistani Pregnant Women-dispelling the False Sense of Protection

Sir,

Vitamin D is an essential micronutrient & a secosteroid hormone important for maintaining health & preventing disease. There is increasing evidence for its implication in a variety of diseases. Its actions are mediated through its receptors which bind with its active metabolite 1,25 dihydroxy cholecalciferol (1,25 [OH]2 vit D). Its functions in calcium & bone metabolism are well known. Currently there is increasing recognition of its non classical functions in a variety of cell types. These include modulation of innate & adaptive immune responses.[1] It acts as a disease modifier in a variety of chronic diseases which include osteomalacia, rickets, diabetes, multiple slerosis, schizophrenia, heart disease, & cancer.[2] Mother is the major source of 25 hydroxycholecalciferol, first precursor of the active form 1,25 [OH]2 vit D. Mother's status is the determining factor for neonatal 25 [OH]2 levels & thus influences their risk of developing deficiency states & infantile rickets. International studies have discovered that despite abundant sunshine vitamin D deficiency is common in pregnant women ranging from 65% to 87%.[3-5] This deficiency is not confined to veiled women or those with dark skins. A current study from Karachi reported 89% of parturient mothers being vitamin D deficient with 45% being severely deficient <=10ng/ml. The same also showed inverse correlation between maternal 25 hydroxy vitamin D3 levels & maternal mean arterial blood pressure pointing to the risk of hypertensive disorders in pregnant women deficient in vitamin D.[3] Another study from Karachi with 50 participants, revealed deficiency level <25ng/ml in 46% pregnant women whereas its insufficiency was observed in 32% of pregnant women.[6] These facts point out that despite abundant sunshine our pregnant population is at high risk for vitamin D deficiency, making neonates vulnerable to be born with a deficient state. Vitamin D supplementation to study groups of mothers, in dosages described in a wide range from 2000 -64000 IU/day improve anti rachitic milk activity & infant vitamin D status.[7] There is a need to conduct large scale studies to supplement these findings following which consideration should be given to devise national guideline for vitamin D supplementation to Pakistani pregnant women.

REFRENCES

1. Shin JS, Choi MY, Longtine MS, Nelson DM. Vitamin D effects on pregnancy and the placenta. Placenta 2010; 31:1027-34.
2. Kaludjerovic J, Vieth R. Relationship between vitamin D during perinatal development and health. J Midwifery Womens Health 2010; 55:550-60.
3. Hossain N, Khanani R, Hussain-Kanani F, Shah T, Arif S, Pal L. High prevalence of vitamin D deficiency in Pakistani mothers and their newborns. Int J Gynaecol Obstet 2011; 112:229-33.
4. Judkins A, Eagleton C. Vitamin D deficiency in pregnant New Zealand women. N Z Med J 2006; 119:U2144.
5. Teale GR, Cunningham CE. Vitamin D deficiency is common among pregnant women in rural Victoria. Aust N Z J Obstet Gynaecol 2010; 50:259-61.
6. Karim SA, Nusrat U, Aziz S. Vitamin D deficiency in pregnant women and their newborns as seen at a tertiary-care center in Karachi, Pakistan. Int J Gynaecol Obstet 2011; 112:59-62.
7. Wagner CL, Taylor SN, Hollis BW. Does vitamin D make the world go 'round'? Breastfeed Med 2008; 3:239-50.

Dr. Saima Aziz
Senior Registrar
Obstetrics & Gynecology, Unit-1,
Dow University of Health Sciences, Karachi, Pakistan
Email: symaaziz@gmail.com