

Descriptive study of vitamin D deficiency in a non-supplemented Mediterranean cohort of pregnant women. The IMPACT-BCN trial

Castillo H, Benitez L, Crovetto F, Larroya M1 Castro-Barquero S, Gomez S, Casas I, Casas R, Estruch R, Gratacos E, Crispi F.
Hospital Clínic de Barcelona, Barcelona, Spain

Objective

Vitamin D deficiency and insufficiency are very common in women around the globe. As requirements are greater during pregnancy, the deficiency among pregnant women is even higher. The relationship between low vitamin D levels and adverse maternal outcomes such as hypertensive disorders, gestational diabetes mellitus, and preterm delivery have been documented in recent years. In this study we try to describe the prevalence of this deficiency in a non-supplemented cohort from a Mediterranean area (Barcelona, Spain).

Methods

Descriptive study of a subcohort of non-supplemented pregnant women included in the IMPACT-BCN trial. Two hundred and eighty-six women were tested for 25(OH)D blood level at trial enrollment (20-24 weeks of gestation) before any intervention was applied. Clinical and sociodemographic variables were assessed in all participants and they have been evaluation as related factors with vitamin D deficiency. A deficiency of vitamin D was considered if 25(OH)D was below 25 ng/ml.

Results

In this sub-cohort of 286 women, the mean maternal age was 36.7 years (SD 5.10), mean body mass index (BMI) was 23.9 (SD 4.9), 225 women (78.6%) were of white ethnicity and 164 (57.2%) were nulliparous. At 20-24 weeks' gestation, the mean vitamin D level was 21.2 (SD 9.8), and 189 women (71.1 %) had a low circulating vitamin D level. Dark-skin type ethnicities and BMI were not related to the vitamin D deficiency in our population. No differences were seen when comparing maternal pregnancy outcomes.

Conclusion

Vitamin D deficiency is a prevalent condition in Mediterranean pregnant women. Future studies are warranted to better define recommendations concerning routine vitamin D supplementation during pregnancy.