

Pregnant Women with Inflammatory Bowel Disease Are at Increased Risk of Vitamin D Insufficiency: A Cross-Sectional Study

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Abstract

Background: Vitamin D insufficiency is prevalent in individuals with inflammatory bowel disease [IBD], as well as in pregnant women; however, the prevalence of vitamin D insufficiency in pregnant women with IBD is unknown. This study assessed the prevalence of vitamin D insufficiency in pregnant women with IBD and the adequacy of recommended supplementation.

Methods: A cross-sectional study was conducted in pregnant women with inflammatory bowel disease [Crohn's disease = 61, ulcerative colitis = 41] and without inflammatory bowel disease [n = 574]. Chi square tests and log binomial regression were used to examine the prevalence of vitamin D insufficiency. Covariates included ethnicity and season. Adequacy of vitamin D supplementation during pregnancy was also assessed.

Results: The prevalence of vitamin D insufficiency [25-OHD \leq 75 nmol/L] in those with Crohn's disease was 50.8% (95% confidence interval [CI]:

38.4%-63.2%) and 60.9% [95% CI: 45.3%-74.7%] with ulcerative colitis compared with 17.4% [95% CI: 14.6%-20.8%] without inflammatory bowel disease. Women with inflammatory bowel disease were more likely to be vitamin D insufficient after adjusting for ethnicity and season (Crohn's disease—adjusted relative risk [aRR] = 2.98,; 2.19-4.04; ulcerative colitis— aRR = 3.61; 95% CI: 2.65-4.93). Despite vitamin supplementation, 32.3% [95% CI: 17.8%-51.2%] of those with Crohn's disease, 58.3% [95% CI: 37.1%-76.9%] of those with with ulcerative colitis, and 10.8% [95% CI: 6.9%-16.6%] of those without inflammatory bowel disease were still vitamin D insufficient.

Conclusions: Pregnant women with inflammatory bowel disease are at increased risk of vitamin D insufficiency compared with those without inflammatory bowel disease. The current guidelines for vitamin D supplementation may be inadequate for pregnant women with inflammatory bowel disease.

Keywords: Vitamin D, Pregnancy, Inflammatory Bowel Disease