

عنوان مقاله:

Effects of vitamin D supplementation on semen quality and reproductive hormones: A randomized double-blind placebo-controlled clinical trial

محل انتشار:

هشتمین کنگره بین المللی و جشنواره دانشجویی طب تولید مثل و سومین کنگره بین المللی ژنتیک تولید مثل (سال: 1398)

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خلاصه مقاله:

Background: Animal models and observational studies have suggested a favorable role of vitamin D and male reproduction. However, randomized clinical trials regarding the effect of vitamin D supplementation on male fertility are rare. Objective: The aim of this study was to examine the effect of vitamin D supplementation on semen quality, reproductive hormones and anthropometric measurements in infertile men with deficient vitamin D levels. Materials and Methods: 44 individual males with infertility were randomly assigned to treatment group (supplemented with 9 pearls of vitamin D containing 50000 IU vitamin D3) or control group (received 9 pearls of placebo), one pearl per week for 12 weeks. Semen quality markers (sperm count, morphology, sperm motility, sperm volume), total testosterone, sexual hormone binding globulin (SHBG), free androgen index (FAI), and anthropometric measurements (weight, Body mass index (BMI), waist circumference (WC), Hip circumference (HC), waist to hip ratio (WHR) were measured at baseline and end of the study. Results: Serum 25 (OH) D levels of were significantly higher in men in the treatment group compared with the placebo group. In a multivariate adjusted model, vitamin D supplementation decreased WC significantly in comparison to control group. However, no statistical significant differences were seen in changes of semen quality markers (sperm count, morphology, sperm motility, sperm volume), total testosterone, sexual hormone binding globulin (SHBG), FAI and other anthropometric values ($p > 0.05$). Conclusion: Vitamin D supplementation did not improve semen quality markers, reproductive hormones and other anthropometric measurements in vitamin D-deficient infertile men compared to control group. Larger and longer randomized clinical trials (RCTs) are needed to investigate the possible effects of vitamin D supplementation in treatment of infertility.

کلمات کلیدی:

Vitamin D, Male infertility, Semen quality, Reproductive hormones

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