

عنوان مقاله:

Assessment of the effect of serum and follicular fluid vitamin D and glucose on assisted reproductive technique outcome: A cross-sectional study

محل انتشار:

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خلاصه مقاله:

Background: Vitamin D and glucose play an important role in the female reproductive system. Objective: The aim of this study was to assess the effect of serum and follicular fluid vitamin D on assisted reproductive technique (ART) outcomes. Materials and Methods: ۱۰۲ infertile women were enrolled in the study. All cases received the routine in vitro fertilization protocol. On the oocyte retrieval day, a sample of their peripheral blood and follicular fluid was obtained to determine the level of vitamin D and glucose. We also evaluated ART outcomes including oocytes, ۲ pronucleus and embryo number, implantation, chemical and clinical pregnancy, and abortion rate. Finally, the effect of serum and follicular fluid vitamin D and glucose on the ART outcomes was assessed. Results: There was no difference in the characteristics, serum vitamin D, follicular fluid vitamin D, fasting blood sugar (FBS), or follicular fluid glucose between the women with vs. without a positive clinical pregnancy. There was no significant difference between the ART outcomes based on vitamin D level. The mean follicular fluid glucose levels in women who were deficient, insufficient and sufficient in vitamin D were 65.20 ± 14.65 , 63.47 ± 14.90 and 55.97 ± 15.64 , respectively. Follicular fluid glucose was lower in women with sufficient vitamin D levels and this difference was statistically significant ($p = 0.01$). There was no relationship between the three follicular fluid vitamin D levels and ART outcomes. In women with normal FBS levels, the level of follicular fluid vitamin D was significantly lower than in the women with pre-diabetic FBS status ($p < 0.001$). Conclusion: The present study showed that serum vitamin D level, follicular fluid vitamin D level, FBS, and follicular fluid sugar were not predictive parameters for ART outcomes.

کلمات کلیدی:

Vitamin D, Glucose, Follicular fluid, Pregnancy, Assisted reproductive techniques, ویتامین D.

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