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P120. Importance of serum vitamin d in surrogacy motherhood program and ivf success rates

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Context

It is well established that Vitamin D levels are associated with certain pregnancy complications such as gestational hypertension and diabetes. In reproduction it has been shown that the active form of vitamin D, namely calcitriol, is involved in controlling genes in making estrogen and embryo implantation. Several studies have been reveal whether replete, deficient or insufficient levels of vitamin D have a significant effect in IVF success rates. In a surrogacy program (SMP) such effects are magnified by the urgency of providing a pregnancy and birth of a healthy child in a single IVF.

Objective

To assess the significance of serum vitamin D levels in women undergoing IVF with their own oocytes in a SMP.

Methods

All measurements were performed in the same clinical lab and values were assigned as women with deficient 25-hydroxy-vitamin D [25(OH)D] serum levels (<30 ng/mL) (Group 1) and normal with levels ? 30 ng/mL (Group 2).

Patients

We measured vitamin D serum levels in a total of 23 women who participated in our SMP and provided their own oocytes via hormonal stimulation over a period of 24 months.

Main Outcome Measure(s)

No attempt was made to alter the levels of Vitamin D prior to their first round of IVF (hormonal stimulation, oocyte pick-up, ICSI and embryo transfer) regardless of normal, deficient or insufficient levels. Women who did not succeed in the first round of IVF (and had at least a vitamin D deficiency) were given a daily pill of 1g Vitamin D3 (Solgar, UK) until levels were replete. A second, identical round of IVF was performed and live birth rates were assessed.

Results

A total of 4 women had normal Vitamin D levels where as 19 had deficient levels in their initial round of IVF. In Group 1, 8/19 had a positive B-HCG result but only four went on to give a healthy baby (21%). In Group 2 a total of 2/4 had a positive pregnancy and both subsequently continued to live birth (50%). Following, vitamin D supp., fifteen women were subjected to a second round of IVF and ten showed a positive BHCG result, out of which 8/10 continued to give a live birth (53.3%).

Conclusions

Our study aimed to show such effect in a Surrogacy Program where the need of increased IVF success rates are much sought. The numbers of the study are limited due to the nature of our patients. However,

it was clearly shown that live birth rates between Vitamin D treated and non-treated women were significantly different (21% vs 53.3.%).

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