

6th International Conference on
UROLOGY AND RENAL HEALTH

May 04-05, 2023 | Zurich, Switzerland

Received date: 13.04.2023 | Accepted date: 15.04. 2023 | Published date: 08.05.2023

Assessment of the relationship between vitamin D with semen analysis parameters and reproductive hormones levels before and after kidney transplantation: An Iranian randomized and double-blinded study

Hossein Dialameh

Tehran University of Medical Sciences, Iran

Background: Vitamin D's role is noticeable on homeostasis of calcium and phosphorous and bone mineralization. Some studies prove that vitamin D has a role in reproductive pathways in male and females and its direct relationship with serum androgen levels in males. The common problem of infertility can be seen in 10%–15% of couples. 25%–50% of all infertilities is due to a male factor, and fertility disturbances are common in male CKD patients.

Objectives: This study aimed to figure out the effect of serum vitamin D levels on semen analysis parameters and reproductive hormones before and after renal transplantation in ESRD patients.

Methods: This double-blind randomized clinical trial was carried out on 70 ESRD males (21–48 years old) who were candidates for renal transplantation at Sina hospital between 2021 and 2022. Participants were divided into two groups randomly. First group was supplemented by vitamin D (50,000 units weakly until 3 months), and no intervention was done in the second group. Vitamin D levels, LH, FSH, creatinine, glomerular filtration rate (GFR), calcium, total and free testosterone, PTH, sexual function, and semen analysis parameters were evaluated in a determined interval before and after (three and 6 months) kidney transplantation

Results: Vitamin D levels were noticeably higher in case group in comparison to the control group (p -value < 0.01) but the difference in all other variables including calcium levels, LH, FSH, total and free testosterone, IIEF-5 score, PTH, GFR, and creatinine was insignificant (p -value > 0.05). The comparison of semen parameters of the case with control group including sperm count, morphology, volume, and motility didn't reveal a noticeable difference between the two groups (p -value > 0.05).

Conclusion: Prescription of vitamin D as a supplementation doesn't improve sperm quality (sperm count, motility, morphology, and volume) and reproductive hormones (LH, FSH, free and total testosterone) after kidney transplantation in male CKD patients.

Recent publications

1. Arab A, Hadi A, Moosavian SP, et al. The association between serum vitamin D, fertility and semen quality: a systematic review and meta-analysis. *Int Surg J* 2019; 71: 101–109.
2. Abbashormozi S, Kouhkan A, Alizadeh AR, et al. Association of vitamin D status with semen quality and reproductive hormones in Iranian subfertile men. *Andrology* 2017; 5(1): 113–118.
3. Ciccone IM, Costa EM, Pariz JR, et al. Serum vitamin D content is associated with semen parameters and serum testosterone levels in men. *Asian J Androl* 2021; 23(1): 52–58.

Biography

Hossein Dialameh, Associate professor of urology of Tehran university of medical sciences and fellowship of renal transplant surgery is a graduate of Shiraz university of medical sciences as general physician and started urology specialty in Tehran University of Medical Sciences and was the top rank of the specialized urology board of the country in 2015. He obtained renal transplant surgery fellowship from Tehran University of Medical Sciences.

e: hossein.dialameh@gmail.com