

Role of Growth Hormone in Countering the Effects of Anxiety and Depression in Women Undergoing in-vitro Fertilization-Embryo Transfer [Letter]

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Dear editor

I have read the article entitled “The analysis of anxiety and depression in different stages of in-vitro fertilization-embryo transfer in couples in China” by Liu et al published in *Neuropsychiatric Disease and Treatment*.¹ I want to acknowledge the authors for this successful research article and make some contributions.

In the article, the effect of anxiety and depression on the outcomes of IVF-ET has been studied indicating that there is high incidence of anxiety and depression in couples undergoing IVF-ET, particularly in women. Although the study concluded that there is no significant association between anxiety and depression and IVF-ET outcomes ($p>0.05$), there is still a need of a much more extensive investigation.

Regarding this matter, I have something to suggest. I think that this study should have included an examination of changes in hormonal index of women involved in the study. While the study conducted by An et al² did an examination on the changes in stress influencing the outcomes of IVF via the activation of hypothalamus-pituitary-adrenal (HPA) axis, there is still a need of a thorough study which involves hormones that are part of the HPA axis. In this matter, role of Growth Hormone should be investigated in increasing the efficacy of IVF-ET in women with high level of anxiety and depression. The randomized control trial, conducted by Hart,³ conclusively showed that pretreatment with GH alleviates Oxidative Stress (OS), involved in the pathogenesis of Poor Ovarian Responders (POR), and improves oocyte quality and outcomes of PORs.

Therefore, the potential applications of GH in women with anxiety and depression related issues does warrant attention and should be thoroughly investigated. For this, I suggest that a study consisting of two groups of women diagnosed with clinical anxiety and depression undergoing IVF should be done, with one group pretreated with GH, and both examined to find any conclusive indication that GH pretreatment increases the efficacy of the IVF-ET procedures by countering the effects of severe anxiety and depression.

Disclosure

The author reported no conflicts of interest for this communication.

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