

عنوان مقاله:

Coenzyme Q₁₀ improves ovarian histology and attenuates the expression of angiogenesis-associated proteins in the ovary of rats with experimental hyperstimulation syndrome

محل انتشار:

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نویسندگان:

Zahra Darabi - *Master of Histology Student, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Zahra Basir - *Department of Basic Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Mohammad Reza Tabandeh - *Department of Biochemistry and Molecular Biology, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Zohreh Ghotbeddin - *Stem Cells and Transgenic Technology Research Center, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

خلاصه مقاله:

Objective(s): Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic complication characterized by many side effects. Coenzyme Q₁₀ (CoQ₁₀) is a protective lipophilic molecule with an extensive range of biological functions, but its possible protective effect on the ovary in OHSS has not as yet been studied. The present study aimed to investigate the potential protective effects of CoQ₁₀ on ovarian histological and molecular alterations in an experimental model of OHSS in rats. Materials and Methods: Thirty female (۲ months old) Wistar rats were randomly divided into ۶ equal groups: control, OHSS, OHSS+CoQ₁₀ (OHSS+ ۲۰۰ mg/kg CoQ₁₀ for ۱۰ days), OHSS+ cabergoline (CAB) (OHSS+ ۱۰۰ µg/kg CAB for ۶ days), and CoQ₁₀ and CAB (rats receiving similar doses to treatment groups). In the end, the effects of treatments were assessed by measuring expressions of vascular endothelial growth factor (VEGF) and cyclooxygenase-۲ (COX-۲) in the ovary via western blotting, ovarian histomorphological alterations assessments, and serum estradiol and progesterone levels via ELISA. Results: There were histological alterations in OHSS groups, including the elevation of diameter and numbers of the corpus luteum and atretic follicles, and decreasing follicular reserve count, hyperemia, and hemorrhage at ovarian stroma. Treatment of OHSS groups with CAB and CoQ₁₀ could decrease histological changes, serum estrogen and progesterone, and overexpression of VEGF and COX-۲ proteins. Conclusion: Our results showed that ovarian histological and molecular alterations observed in experimental OHSS can be ameliorated by administration of CoQ₁₀, indicating that CoQ₁₀ can be used as new supportive care for OHSS patients.

کلمات کلیدی:

Angiogenesis, Cabergolin, Coenzyme Q₁₀, Gene expression, Histomorphology ovary, OHSS

لینک ثابت مقاله در پایگاه سیویلیکا:

