

عنوان مقاله:

Effect of nanocurcumin on fertility in murine model of polycystic ovary syndrome

محل انتشار:

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خلاصه مقاله:

The precise pathophysiology of polycystic ovary syndrome (PCOS) is not well-founded. In an attempt to fill this gap, the current study was executed to probe the effect of nanocurcumin (NCC) on ovarian tissue, in vitro fertilization (IVF) and pre-implantation embryo development in a mouse model of PCOS. Fifty adult female mice were randomly categorized into five equal groups including non-treated control and PCOS (receiving ۰.۲۰ mg estradiol valerate (EV) intra-peritoneally once a day for ۲۱ days) as well as NCC۱۲.۵۰ + PCOS, NCC۲۵ + PCOS and NCC۵۰ + PCOS (receiving respectively ۱۲.۵۰, ۲۵.۰۰ and ۵۰.۰۰ mg kg^{-۱} NCC daily along with EV injection through oral gavages for ۲۱ days) groups. Subsequently, ovarian histo-architecture and total anti-oxidant capacity, and malonaldehyde and catalase levels as well as in vitro fertilizing potential, early embryonic development and serum testosterone concentration were analyzed. Results showed that NCC in a dose-dependent manner improved ovarian cyto-architectural organization and oxidant/anti-oxidant balance along with IVF rate and pre-implantation embryo development in PCOS mice. These findings revealed that NCC at the doses of ۲۵.۰۰ and ۵۰.۰۰ mg kg^{-۱} could alleviate .PCOS-linked reproductive disruptions in female mice

کلمات کلیدی:

Fertility, Mice, Nanocurcumin, Ovary, Polycystic Ovary Syndrome

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