

论著

己烯雌酚致胚胎期辜丸引带形态结构发育异常的研究

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摘要 背景与目的: 研究环境外源性雌激素己烯雌酚(Diethylstilbestrol,DES)对胚胎小鼠辜丸引带形态发育的影响, 探讨DES影响辜丸以及生殖系统发育的机制。材料与方法: 昆明雌性小鼠60只, 随机分成6组, 于孕9~17 d每天分别给予DES 25、50、100、200 $\mu\text{g}\cdot\text{kg}^{-1}\cdot\text{d}^{-1}$ 和等体积的DMSO、生理盐水作空白和正常对照。孕19 d处死母鼠, 取出活胎, 取其下腹部, 分别作光镜和电镜固定。观察辜丸引带的组织形态学及细胞超微结构变化。结果: DES可致辜丸引带发育不良: 体积缩小, 形态异常, 组织结构紊乱, 细胞内肌丝细小, 排列紊乱, 密体不明显, 胞浆中细胞器散在分布。DES剂量越大, 辜丸引带形态异常及组织细胞结构紊乱现象越明显。结论: DES可致胎鼠辜丸引带形态异常、组织细胞结构紊乱, 且有剂量效应关系。

关键词 [己烯雌酚](#); [外源性雌激素](#); [辜丸引带](#); [形态学](#)

The Effect of Diethylstilbestrol on Gubernaculum Testis Development in Fetal Mice

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Abstract **BACKGROUND & AIM:** To investigate the effects of prenatal exposure to exoestrogens diethylstilbestrol (DES) on the development of gubernaculum testis in fetal mice. **MATERIAL AND METHODS:** Sixty pregnant Kunming mice were divided into 6 groups randomly and administered subcutaneously from gestational day(GD) 9 though GD17 with DES at a dose of 25, 50, 100, 200 $\mu\text{g}\cdot\text{kg}^{-1}\cdot\text{d}^{-1}$ (all dissolved in 0.2 ml dimethyl sulfoxide (DMSO)) and with DMSO only(as control), normal saline alone (as normal control), respectively. Pregnant mice were sacrificed on GD19 and fetuses were quickly removed, the lower part of the male fetuses were fixed according to the need of study with light microscope, scanning and transmission electron microscope. **RESULTS:** In experimental groups, gubernaculum testis seemed underdeveloped, with smaller volume and abnormal shape, and the bulbs lose clear demarcation between the inner mesenchymal core and muscular outerlayer, gubernaculum cells had some smaller disordered myofibrils, and few fibrils could be seen in myofibrils, there were only some sparse organelles in cytoplasm. All these results closely related to the dosage of DES. **CONCLUSION:** DES could induce underdevelopment of gubernaculum testis of fetal male mice with obvious dose-effect correlation.

Keywords [diethylstilbestrol](#) [exoestrogens](#) [gubernaculum](#) [morphology](#)

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