癌变.畸变.突变 ISSN: 1004-616x CN:44-1063/R 2005; 17(3) :144-147

论著

氟哌啶醇对小鼠卵母细胞染色体的影响

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收稿日期 2005-2-18 修回日期 2005-3-25 网络版发布日期:

摘要 背景与目的： 探讨抗精神病药氟哌啶醇(Haloperidol，Hal)在卵子发生过程中对卵母细胞染色体的影响。 材料与方法： 将40个12周龄健康雌性小鼠随机分为4组，分别按0、 0.05、 0.50、 5.00 mg/(kg•d)腹腔注射Hal，连续注射8 d，通过超排收集卵母细胞，制备染色体标本进行核型分析。 结果: 对照组、0.05、0.50、5.00 mg/(kg•d)组的实验参数分别为，①超单倍体率：3.8 %、 4.4 %、 7.3 %、18 %；②非整倍体率：7.5 %、8.8 %、14.5 %、36.0 %；③退化卵母细胞率：1.3 %、1.4 %、1.8 %、10.0 %；④染色体分离均数：0.013、0.014、0.018、0.100。0.05、0.50 mg/(kg•d)组分别与对照组比较，各实验参数间的差异没有统计学意义(P>0.05)。5.00 mg/(kg•d)组各实验参数值均比对照组高，其差异具有统计学意义(P<0.05)。 结论: 大剂量Hal有可能诱发卵母细胞非整性增加并引起卵母细胞退化。

关键词 氟哌啶醇； 卵母细胞； 非整倍体； 染色体分离

Effects of Haloperidol on Mouse Oocyte Chromosomes

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Abstract BACKGROUND & AIM: To investigate the effects of haloperidol (Hal) on oocyte chromosomes in oogenesis. MATERIAL AND METHODS: Forty healthy female mice, 12 weeks-old, were randomly divided into four groups. The animals of different groups were exposed to Hal by intra-peritoneal injection of 0, 0.05, 0.50 and 5.00 mg/(kg•d) of Hal for successive 8 days, respectively. Oocytes were collected by superovulation and the metaphase were prepared for karyotypic analysis. RESULTS: For 0, 0.05, 0.50 and 5.00 mg/(kg•d) Hal-groups, the frequencies of hyperhaploid complements were 3.8 %,4.4 %,7.3 %,18 %, the frequencies of aneuploid complements were 7.5 %,8.8 %,14.5 %,36.0 %, the frequencies of degenerative oocytes were 1.3 %,1.4 %,1.8 %,10.0 % and the mean number of splitting chromosomes were 0.013,0.014,0.018,0.100, respectively. Comparing all the experimental parameters of the 0.05 and 0.50 mg/(kg•d) Hal-groups with those of the control, no significant differences were observed (P>0.05). All the experimental parameters of 5.00 mg/(kg•d) Hal-group were higher than those of the control, and the differences of the parameters between two groups were statistically significant. CONCLUSION: A large-dose of Hal might be able to induce aneuploidy and degeneration of oocytes in oogenesis.

Keywords haloperidol oocyte aneuploidy degeneration

DOI

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