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论著

依立雄胺对大鼠、犬和人精子活力的影响

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摘要 目的 用更敏感的指标评价依立雄胺的生殖毒性。方法 将精悬液与不同浓度的依立雄胺共育1 h, 2 h后，借助计算机辅助分析系统录像分析精子活力参数的变化。结果 大鼠精子给予终浓度为0.6, 6和60 μmol·L^{-1}的依立雄胺1 h后，精子活率（MOT）较对照组分别下降19.0%, 18.0%, 16.0%；2 h后，中高剂量组的MOT较对照组分别下降9.0%, 10.0%，且高剂量组的前向性降低。Beagle犬给予终浓度0.6, 6和60 μmol·L^{-1}依立雄胺1 h后MOT较对照组呈下降趋势，但无显著性差异，2 h后MOT较对照组分别下降31.0%, 24.9%, 28.3%。人精子体外给药实验中，给予终浓度为0.12, 0.24和0.96 μmol·L^{-1}的依立雄胺2 h后，曲线运动速度、直线运动速度较对照组呈下降趋势，但无显著性差异，而高剂量组的精子头侧摆幅度、精子尾摆动性及MOT较对照组分别下降28.0%, 5.0%, 15.0%。结论 依立雄胺对精子具有一定的直接毒性，这种毒性存在种属差异，且不表现为剂量-反应关系。

关键词 依立雄胺 精子活率 大鼠 犬 人类

分类号 R983

Effect of epristeride on the motion of sperm in rats, dogs and humans

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Abstract

AIM To evaluate the reproductive toxicity of epristeride with a more sensitive index. **METHODS** The sperm samples were treated with different concentrations of epristeride *in vitro*, then, computer-assisted sperm analysis system was used to detect sperm motion after 1 h and 2 h incubation. **RESULTS** The percentage of motile sperm (MOT) of rat sperm treated with epristeride (final concentrations were 0.6, 6 and 60 μmol·L^{-1}, respectively) were decreased 19.0%, 18.0%, and 16.0%, respectively, after 1 h, and MOT of rat sperm at middle dose and high dose levels were decreased 9.0%, 10.0, respectively, after 2 h. While straightness of rat sperm at high dose level was decreased after 2 h. In beagle dogs sperm *in vitro* test, MOT of epristeride groups (final concentrations were 0.6, 6 and 60 μmol·L^{-1}, respectively) were lower 31.0%, 24.9%, 28.3%, respectively, than that of control after 1 h (P=0.07), and differences were significant after 2 h (P<0.05). In human sperm test *in vitro*, the curvilinear velocity and velocity straight line of epristeride treatment groups (final concentrations were 0.12, 0.24 and 0.96 μmol·L^{-1}, respectively) were slightly changed than that of control group after 2 h, but amplitude of lateral head displacement, wobble and MOT of human sperm at high dose level were decreased 28.0%, 5.0% and 15.0%, respectively, after 2 h. **CONCLLUSION** Epristeride might have toxic effect on sperm in different species but there was no dose-response relationship.

Key words epristeride sperm motility rats dogs human

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