

论著

汞、铅对小鼠睾丸和生殖细胞的亚慢性毒性

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摘要 背景与目的: 研究重金属汞、铅对雄性小鼠睾丸和附睾精子的亚慢性毒性作用及其对生精细胞的遗传损伤。材料与方法: 分别用高中低3种浓度氯化汞、醋酸铅经腹腔染毒4周龄雄性ICR小鼠, 共10次, 之后自由饲养23 d, 于第50 d观察睾丸指数、附睾精子数量、精子活动率和精子头畸形率以及生精细胞微核率和减数分裂异常率。结果: 高浓度醋酸铅组小鼠睾丸指数低于对照组。中、高浓度氯化汞组、3种浓度醋酸铅组附睾精子密度低于对照组。中、高浓度醋酸铅组附睾精子活动率低于对照组。3种浓度氯化汞、醋酸铅致附睾精子畸形率升高。高浓度醋酸铅组生精细胞微核率高于对照组, 3种浓度氯化汞和低、中浓度醋酸铅生精细胞微核率与对照组相比差异无显著性。各处理组减数分裂异常率与对照组差异均无显著性。结论: 汞、铅暴露对小鼠精子具有亚慢性毒性作用, 高浓度铅组影响生精细胞的微核率。

关键词 [重金属](#); [睾丸](#); [精子](#); [微核率](#); [减数分裂](#)

Subchronic Toxic Effects of Mercuric Chloride and Lead Acetate on Testis and Sperm of Male Mice

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Abstract BACKGROUND AND AIM: To study the subchronic toxic effects of mercuric chloride and lead acetate on testis and sperm on male mice. MATERIAL AND METHODS: Male mice of 4 weeks were administered to mercuric chloride (0.25, 0.5, 1.0 mg/kg) and lead acetate (1.5, 6.0, 24.0 mg/kg) by intraperitoneal injection 2 days/week for 30 days. After 23 days, the males were normally fed. Testis index of male mice, sperm count, sperm motility, incidence of teratospermia were observed. RESULTS: The testis index of high level lead acetate group was lower than that of control group ($P < 0.005$); the sperm count of middle and high level mercuric chloride group and each lead acetate group was lower than that of control group ($P < 0.05$, $P < 0.005$); the sperm motility of middle and high level lead acetate group was lower than that of control group ($P < 0.05$); the incidence of teratospermia of each mercuric chloride group and each lead acetate group was higher than that of control group ($P < 0.05$, $P < 0.005$). Micronucleus rate of spermatogenic cell of high level lead acetate group was higher than that of control group ($P < 0.05$). Micronucleus rate of spermatogenic cell of each mercuric chloride group and middle and high level lead acetate group have not significantly with that of control group ($P > 0.05$). Meiosis rate of each group different have not significantly with that of control group ($P > 0.05$). CONCLUSION: The study suggests that mercuric chloride and lead acetate has subchronic toxic effects on the reproductive function, testis and sperm of mice.

Keywords [heavy metals](#) [testis](#) [sperm](#); [micronucleus rate](#); [meiosis](#)

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