癌变.畸变.突变 ISSN: 1004-616x CN:44-1063/R 2006; 18(6) :482-484

检测研究

特丁净致突变性与蓄积毒性实验研究

杨卫超1；徐 立2

(1. 河北省疾病预防控制中心， 河北 石家庄 050041； 2. 邢台市第五医院，河北 邢台 054027)

收稿日期 2006-3-2 修回日期 2006-6-6 网络版发布日期:

摘要 【摘要】 背景与目的: 研究特丁净的致突变性与蓄积毒性。 材料与方法: 采用小鼠睾丸精母细胞染色体畸变试验，鼠伤寒沙门氏菌回复突变试验(Ames试验)，小鼠骨髓多染红细胞微核试验，固定剂量蓄积毒性系数法。 结果: 小鼠睾丸M1期精母细胞染色体畸变数阴性对照组与特丁净各剂量组间差异无统计学意义(P>0.05),而阴性对照组和特丁净各剂量组均低于环磷酰胺组(P<0.05);小鼠骨髓多染红细胞微核率阴性对照组与特丁净原药各剂量组间差异均无统计学意义(P>0.05),而阴性对照组和特丁净各剂量组均明显低于环磷酰胺组(P<0.01);四株试验菌在各试验剂量下(活化或非活化)均没有引起自发回变数呈2倍的增加，5.0 mg/皿剂量组对四个菌株均有抑菌作用，而0.5、1.0、2.0 mg/皿组无剂量反应关系。特丁净原药蓄积系数为1.4。 结论: 特丁净原药根据《农药登记毒理学试验方法》评定标准，未呈现致突变性，小鼠骨髓多染红细胞微核试验在所选剂量范围内结果为阴性，小鼠睾丸精母细胞染色体畸变试验在所选剂量范围内结果为阴性，但蓄积毒性明显。

关键词 特丁净原药 Ames试验 微核试验 蓄积毒性

Study on the Mutagenicity and Cumulative Toxicity of Terbutryn

YANG Wei-chao ,Xu Li

（1. Hebei Province Center for Disease Prevention and Control, Shijiazhuang 050041,Hebei, China; 2. Xingtai Fifth Hospital, Xingtai 054027, Hebei, China)

Abstract 【ABSTRACT】 BACKGROUND&AIM: To study the mutagenicity and cumulative toxicity of terbutryn. MATERIALS AND METHODS: Strains TA97,TA98,TA100 and TA102 with or without S9 were used for Ames test (at doses of 0.5,1.0,2.0 and 5.0 mg/plate).Also used micronucleus assay of polychromatic erythrocytes (at doses of 400,800 and 1 600 mg/kg) and spermatogonia chromosome aberration test on mice (at doses of 200,400 and 800 mg/kg). RESULTS: Ames test showed that terbutryn group didn't cause double increase of revertants with or without S9 addition in any of the bacterial strain. Four doses, 0.5,1.0,2.0 and 5.0 mg/plate showed no dose-response relationship .No significant difference was found in the micronucleus test and the chromosome aberration test between negative control group and test groups. There was significant difference between those groups and positive control group. Seven days later half of the mice died of cumulative toxicity test. Its cumulation coefficient is 1.4. CONCLUSION: Terbutryn had no mutagenic effect according to these tests but showed significant cumulative toxicity.

Keywords terbutryn Ames test micronucleus assay cumulative toxicity

DOI

通讯作者 杨卫超