

60Co-γ线照射复合热烧伤对染色体畸变的影响

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摘要 将狗于1.0-5.0戈瑞⁶⁰Co-γ线照射和该剂量复合15%二度烧伤, 单纯烧伤和对照组之间, 放射加热复合烧伤和单纯照射组之间, 离体照射和整体照射之间, 染色体畸变无显著性差异。经回归分析表明, 不仅配合的模式相同, 而且同一指标的回归系数相当接近, 狗复合巧%二度烧伤对外周血淋巴细胞染色体畸变未产生影响。因此, 染色体畸变分析有作为放射加热复合烧伤时“生物剂量仪”的可能性。

关键词

分类号

Comparison of the Chromosomal Aberration Incidences in Peripheral Blood Lymphocytes of Dogs Exposed to Thermal Burn and Radiation

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Abstract

Healthy adult dogs of 1.3-25kg were used in this study. They were divided into three groups. The first one was simple irradiated with various doses (1-5 Gy) of ⁶⁰Co γ-rays: *n vivo*. The second was exposed to the same dose of γ-rays *in vitro* and the third was exposed to the same dose of γ-rays but in combination with 15% 2nd degree burns. The incidences of chromosomal aberrations in dog peripheral blood lymphocytes were examined. The chromosomal aberration incidences among the three groups were similar and the differences were not significant. By regression analysis it was shown that not only the models were the same, but also the regression equations of the same indicator among the three groups were almost equal. The above results showed that combination with 15% 2nd degree burns did not affect incidence of chromosomal aberrations induced by γ-ray in the cells of lymphocytes, so the incidence of chromosomal aberrations of lymphocytes can still be used as a biological dosimeter for the individuals damaged with radiation-burn injury.

Key words

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