

论著

60Co-γ射线局部照射对荷瘤大鼠骨髓蛋白质的影响

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摘要 背景与目的: 观察荷瘤大鼠60Co-γ射线局部照射后骨髓蛋白质和相关氧化指标的变化。材料与方法: 制备荷瘤大鼠动物模型, 60Co-γ射线局部照射后分别提取非照射组和照射组大鼠骨髓检测丙二醛(MDA),还原型谷胱甘肽(GSH),氧化型谷胱甘肽(GSSH)等指标; 双向聚丙烯酰胺凝胶电泳技术分析荷瘤大鼠骨髓蛋白质的差异表达。结果: 照射组MDA, GSSG含量与非照射组相比升高(P<0.01), GSH与非照射组相比降低(P<0.01), 双向电泳图谱显示荷瘤大鼠经60Co-γ射线局部照射后骨髓有24个蛋白点表达发生变化, 其中出现2个新蛋白点, 4个蛋白点表达量下降, 1个蛋白点表达量升高, 17个蛋白点消失。结论: 60Co-γ射线局部照射可引起荷瘤大鼠骨髓蛋白质差异表达, 其机制可能与氧化损伤有关。

关键词 [照射](#); [氧化损伤](#); [蛋白质](#); [双向聚丙烯酰胺凝胶电泳](#); [骨髓](#)

Effects of 60Co-γ Ray Local Irradiation on Proteins of Bone Marrow in Tumor-bearing Rats

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Abstract **BACKGROUND & AIM:** To observe the differential expression of proteins and the index of oxidative injury of bone marrow after 60Co-γray local irradiation in tumor-bearing rats. **MATERIAL AND METHODS:** The entitative tumor pieces were embedded into hind leg muscle of rat to prepare tumor bearing rat model. After 60Co-γray local irradiation, the bone marrow of rats in both non-irradiated and irradiated groups were removed respectively, to detect the MDA, GSH, GSSH of bone marrow, and analyze the differential expression of bone marrow proteins by using two-dimensional polyacrylamide gel electrophoresis. **RESULTS:** The levels of alterations of 24 proteins in irradiated group, including 2 new proteins, 4 down-regulated proteins, 1 up-regulated protein and 17 proteins disappeared. **CONCLUSION:** 60Co-γray local irradiation can cause differentially expressed proteins of bone marrow in tumor bearing rats, and oxidative injury may be an important factor for differentially expressed proteins.

Keywords [irradiation](#) [oxidative injury](#) [proteins](#) [two-dimensional polyacrylamide gel electrophoresis](#) [bone marrow](#)

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