

论著

应用FISH技术对我国早期从事医用X线工作者的细胞遗传学评价

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收稿日期 2001-9-30 修回日期 2001-11-27 网络版发布日期:

摘要 目的:对受到长期、低剂量率照射的我国早期从事医用X线工作者辐射损伤的远期效应进行细胞遗传学观察和评价。方法:用4号和7号全染色体探针和荧光原位杂交技术,分析25名早期X线工作者和10名对照者外周血淋巴细胞染色体畸变,并用Giemsa染色验证。结果:直观地表现出正常靶染色体和多种畸变。X线工作者的易位占其染色体总畸变的84%;其他各种畸变率分别为插入(Ins) 1.9%、双着丝粒(Dic) 4.5%、无着丝粒断片(Ace) 9.7%;X线工作者的染色体易位率和总畸变率均明显高于对照组(P < 0.005)。结论:早期医用X线工作者外周血淋巴细胞的染色体畸变以易位为主。

关键词 [荧光原位杂交](#) [X线工作者](#) [染色体畸变](#) [淋巴细胞](#)

CYTOGENETIC EVALUATION OF LONG-TERM IRRADIATION EFFECT ON WORKERS EARLY EN-GAGED IN X-RAY MEDICINE IN CHINA BY FLUORESCENCE IN SITU HYBRIDIZATION

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Abstract Purpose : To evaluate the cytogenetic effect of irradiation on the workers , early engaged in X-ray medicine in China , who had been exposed to X-ray at low dose rate for a long time (22244 years) . Method : The peripheral lymphocyte chromosome aberrations f rom 25 medical X-ray workers and 10 cont rols were analyzed by fluorecence in situ hybridization (FISH) with probes of chromosomes 4 and 7 and verified with Giemsa staining. Results : The normal target chromosomes and their aberration were directly exhibited in morphology. The chromosomes translocations of X-ray workers were 84 % of all chromosome aberrations in this group. Ins (in-sertion) , Dic (dicent ric) and Ace (acent ric f ragment) were 1. 9 % , 4. 5 % and 9. 7 % , respectively. The f requencies of chromosome t ranslocation and total aberrations in X-ray workers were higher than that of the cont rol group (P < 0. 005) . Conclusion : The peripheral lymphocyte of medical X-ray workers exists chromosomes aber-rations , the most part of which are translocations.

Keywords [FISH](#) [X-ray worker](#) [chromosome aberration](#) [lymphocyte](#)

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