

r-H2AX在不同食管癌株系中的剂量时间效应特点

史鸿云^{1, 2}, 祝淑钗¹, 卢付河¹, 王玉祥¹, 苑兰惠², 何丽¹

1. 050017 石家庄, 河北医科大学附属第四医院放疗科; 2. 河北大学附属医院放疗科

Expression of r-H2AX in Time-effect and Dose-response between Different Esophageal Carcinoma Cell Lines

SHI Hongyun^{1, 2}, ZHU Shuchai¹, LU Fuhe¹, WANG Yuxiang¹, YUAN Lanhui², HE Li¹

1. Department of Radiation Oncology, The Fourth Hospital of Hebei Medical University, Shijiazhuang 050017, China; 2. Department of Radiation Oncology, Affiliated Hospital of Hebei University

- 摘要
- 参考文献
- 相关文章

全文: PDF (1001 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要

目的 通过检测不同食管癌株系的r-H2AX时间剂量效应关系, 了解r-H2AX的动力学特点。

方法 将食管癌ECA109和TE13两种细胞株分别给予1、2、4和8Gy的6MV-X线照射, 并分别于0.5、1、2、4、8、12、24 h收集细胞提取蛋白, 检测r-H2AX时间及剂量效应特点。

结果 (1) ECA109细胞和TE13细胞随着放疗剂量的增加, r-H2AX表达量第一次最高点出现的时间逐渐提前。(2) ECA109细胞接受低剂量照射后, r-H2AX在24 h内能够恢复到放疗前的水平, 且剂量越低恢复越快; TE13细胞接受1、2、4和8Gy照射后24 h内r-H2AX均不能恢复到放疗前水平。(3)在0.5、1、2 h这3个时间点, 随着放疗剂量的增加, r-H2AX的表达量并不都是逐渐增加。

结论 TE13细胞较ECA109细胞敏感, 照射后r-H2AX更难恢复到正常水平。

关键词: 食管癌 r-H2AX 时间效应 剂量效应

Abstract:

Objective To investigate the time-effect and dose-effect of r-H2AX in different esophageal carcinoma lines after irradiation.

Methods The dose-response(1, 2, 4, 8Gy) and time-effect of r-H2AX in different esophageal carcinoma lines after irradiation were studied and compared by Western blot. Two cell lines of esophageal carcinoma (ECA109 and TE13) were radiated by 6MV-X ray of (1, 2, 4 and 8Gy) The cells and extracted proteins at 0.5, 1, 2, 4, 8, 12 and 24 h were collected and to study the dose-response and time-effect relationship of r-H2AX.

Results (1) The first peak of r-H2AX expression gradually appeared in advance with the increasing radiation dose of ECA109 cells and TE13 cells. (2) r-H2AX within 24 hours recovered to the level before radiotherapy after low-dose irradiation in ECA109, The level recovered faster if the dose of radiation is lower; r-H2AX can not be recovered to the level before radiotherapy after irradiation of 1, 2, 4 and 8Gy within 24 h in TE13. (3) At 0.5, 1 and 2 h, the expression of r-H2AX in ECA109 and TE13 cells didn't increase with the increase in radiation dose.

Conclusion The level of r-H2AX is more difficult to return to normal levels in TE13 cell line than in ECA109 cell line after irradiation which shows that TE13 is more sensitive to irradiation.

Key words: Esophageal carcinoma; Histone H2AX-Phosphorylation(r-H2AX); Time-effect Dose-response

收稿日期: 2012-05-31;

基金资助:

国家自然科学基金资助项目(30870743)

服务

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ E-mail Alert
- ▶ RSS

作者相关文章

- ▶ 史鸿云
- ▶ 祝淑钗
- ▶ 卢付河
- ▶ 王玉祥
- ▶ 苑兰惠
- ▶ 何丽

作者简介: 史鸿云(1979-), 女, 博士在读, 主治医师, 主要从事食管癌基础与临床研究

引用本文:

史鸿云,祝淑钗,卢付河等. r-H2AX在不同食管癌株系中的剂量时间效应特点[J]. 肿瘤防治研究, 2013, 40(04): 321-326.

SHI Hongyun,ZHU Shuchai,LU Fuhe et al. Expression of r-H2AX in Time-effect and Dose-response between Different Esophageal Carcinoma Cell Lines[J]. Cancer Research on Prevention and Treatment, 2013, 40(04): 321-326.

没有本文参考文献

- [1] 仲楼,曹飞,陈新民. PEBP4基因在食管癌中的表达及其临床意义[J]. 肿瘤防治研究, 2013, 40(02): 172-176.
- [2] 甄婵军,周志国,宋玉芝,乔学英. 食管癌锁骨上淋巴结转移放疗疗效及预后因素分析[J]. 肿瘤防治研究, 2013, 40(01): 90-94.
- [3] 李瑞君,梅家转,禹萌,刘桂举,冯睿婷,张晓娟. 顺铂和氟尿嘧啶增强食管癌细胞NKG2D配体的表达及CIK细胞的杀伤活性[J]. 肿瘤防治研究, 2012, 39(7): 765-768.
- [4] 朱静峰,任正兵,顾海勇,马少君,刘超,陈锁成. DICER基因多态性与食管癌淋巴结转移危险因素的关系[J]. 肿瘤防治研究, 2012, 39(7): 822-825.
- [5] 务森,陈明耀,雒建超,魏立,陈重. 高龄局部进展期食管癌患者术前新辅助放疗的安全性和疗效观察[J]. 肿瘤防治研究, 2012, 39(7): 838-840.
- [6] 程栋梁,张军,林意,李谦平,曾敏,刘华松. 食管癌术后乳糜胸的诊疗体会[J]. 肿瘤防治研究, 2012, 39(7): 876-877.
- [7] 尹雪,刘杰,田金徽. 紫杉醇联合顺铂同步化疗治疗中晚期食管癌的Meta分析[J]. 肿瘤防治研究, 2012, 39(7): 851-854.
- [8] 赵连梅,王晓华,颜晰,耿艺曼,王玲,刘丽华,单保恩. 香加皮宝霍甙-I 抑制人食管癌细胞增殖的机制[J]. 肿瘤防治研究, 2012, 39(6): 662-666.
- [9] 崔艳慧,梁海军,张清琴,路平,苗战会. 三氧化二砷对人食管癌细胞株EC-1的放射增敏作用[J]. 肿瘤防治研究, 2012, 39(6): 667-670.
- [10] 段孝凤,高晓旭,顾宪文. 食管癌术后颈部淋巴转移复发76例临床分析[J]. 肿瘤防治研究, 2012, 39(5): 563-566.
- [11] 雷秋香,赵连梅,颜晰,张倩,单彪,耿艺曼,单保恩. 连翘叶乙醇提取物对人食管癌细胞增殖抑制作用的研究[J]. 肿瘤防治研究, 2012, 39(4): 394-399.
- [12] 刘丽华,孟君,张璁,段玉青,王士杰,单保恩. 运用MALDI-TOF MS方法建立食管癌患者血清蛋白指纹图谱诊断模型[J]. 肿瘤防治研究, 2012, 39(2): 169-172.
- [13] 陈杰,张新民,宋劲松,严想元,张斌. 手辅助电视胸腔镜食管癌切除术13例分析[J]. 肿瘤防治研究, 2012, 39(10): 1280-1280.
- [14] 陶华,孔诚,陆进成. 食管癌术后复发患者调强放疗同步化疗(5-Fu+奈达铂)的II期临床研究[J]. 肿瘤防治研究, 2012, 39(10): 1261-1264.
- [15] 李娟,祝淑钗,刘志坤,苏景伟,沈文斌. PTTG和MMP-9蛋白表达在食管癌临床分期中的价值[J]. 肿瘤防治研究, 2012, 39(10): 1243-1245.

鄂ICP备08002248号

版权所有 © 《肿瘤防治研究》编辑部

本系统由北京玛格泰克科技发展有限公司设计开发 技术支持: support@magtech.com.cn