

阿糖胞苷对急性白血病细胞中cFLIP表达的影响

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年24期 页码: 4445-4447 栏目: 论著(造血器·淋巴系肿瘤) 出版日期: 2019-11-08

Title: Influence of Ara-C on expression of cFLIP in primary acute leukemic cells

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关键词: cFLIP; 急性白血病; Ara-C; 凋亡; RT-PCR

Keywords: cFLIP; acute leukemia; Ara-C; apoptosis; RT-PCR

分类号: R733.71

DOI: 10.3969/j.issn.1672-4992.2019.24.029

文献标识码: A

摘要: 目的:研究在不同类型初治急性白血病细胞中cFLIP基因的表达以及阿糖胞苷(Ara-C)对其表达的影响。方法:选取36例初治的急性白血病患者骨髓,分离单个核细胞在体外培养,分成两组:未处理组、Ara-C处理组,同时选取10例非恶性血液病患者的骨髓并分离单个核细胞作为对照组,培养48小时后,采用逆转录PCR(RT-PCR)法检测cFLIP基因的表达水平。结果:cFLIP在正常人骨髓细胞中不表达或低表达,急性白血病患者骨髓细胞的cFLIP表达水平增高($P < 0.05$);cFLIP在不同类型急性白血病之间的表达无显著统计学差异($P > 0.05$);Ara-C可使初治急性白血病患者骨髓细胞的cFLIP表达水平明显下降($P < 0.05$)。结论:cFLIP表达水平增高可能与急性白血病的发生相关;Ara-C治疗白血病的机制之一可能是通过抑制cFLIP的表达而促进白血病细胞的凋亡。

Abstract: Objective:To investigate the expression of cFLIP in primary acute leukemic cells and the effect of Ara-C on cFLIP expression in acute leukemic cells.Methods:Bone marrow mononuclear cells (BMMNC) from 36 cases of acute leukemia were cultured in vitro in 2 groups:Untreated,Ara-C treated.Meanwhile,BMMNC from 10 cases of health adult as control group.After cultured for 48 h,the expression of cFLIP was assessed by RT-PCR.Results:This study found the low expression of cFLIP in the BMMNC of health adult and significantly high expression of cFLIP in the BMMNC of acute leukemia ($P < 0.05$).In vitro culture test,Ara-C down regulated the expression of cFLIP on acute leukemia BMMNC ($P < 0.05$).Conclusion:cFLIP is related to the acute leukemia.The apoptosis is inhibited by cFLIP,which may play an important role in therapy of leukemia by Ara-C.

参考文献/REFERENCES

- [1] Kleinesudeik L,Rohde K,Fulda S.Regulation of the antiapoptotic protein cFLIP by the glucocorticoid Dexamethasone in ALL cells [J] .Oncotarget,2018,9(23):16521-16532.
- [2] Irmiler M,Thome M,Hahne M,et al.Inhibition of death receptor signals by cellular FLIP [J] .Nature,1997,388(6638):190-195.
- [3] Dillon C,Oberst A,Weinlich R,et al.Survival function of the FADD-CASPASE-8-cFLIPL complex [J] .Cell Reports,2012,1(5):401-407.
- [4] Limin C,Jing L,Yu W,et al.Enhanced anti-melanoma efficacy of interferon α -2b via overexpression of ING4 by enhanced Fas/FasL-mediated apoptosis [J] .Oncology Letters, 2018(15):9577-9583.
- [5] ZHANG ZN,SHEN T.Blood disease diagnosis and efficacy criteria [M] .3rd ed.Beijing:Science Press, 2007:131-132. [张之南,沈悌.血液病诊断及疗效标准 [M] .3版.北京:科学出版社, 2007:131-132.]
- [6] Um HJ,Chauhan AK,Min KJ,et al.Differential expression patterns of the short and long isoform of cFLIP on FasL-mediated apoptosis [J] .Oncology Reports,2018,39(5):2443-2449.
- [7] Chen H,Xiao L,Zhang H,et al.The involvement of β -actin in the signaling of transmembrane TNF- α -mediated cytotoxicity [J] .J Leukoc Biol,2011,89(6):917-926.
- [8] Weinlich R,Oberst A,Dillon C,et al.Protective roles for Caspase-8 and cFLIP in adult homeostasis [J] .Cell Reports,2013,5(2):340-348.

- [9] Mclornan D, Hay J, Mclaughlin K, et al. Prognostic and therapeutic relevance of c-FLIP in acute myeloid leukaemia [J]. *Br J Haematol*, 2013, 160(2):188-198.
- [10] Padmanabhan C, Rellinger EJ, Zhu J, et al. cFLIP critically modulates apoptotic resistance in epithelial-to-mesenchymal transition [J]. *Oncotarget*, 2017, 8(60):101072-101086.
- [11] Seo SU, Cho HK, Min K, et al. Thioridazine enhances sensitivity to carboplatin in human head and neck cancer cells through downregulation of c-FLIP and Mcl-1 expression [J]. *Cell Death and Disease*, 2017, 8(2):e2599.
- [12] Zhou J, Huang Z, Wang Z, et al. Tumor suppressor BLU promotes TRAIL-induced apoptosis by downregulating NF- κ B signaling in nasopharyngeal carcinoma [J]. *Oncotarget*, 2017, 8(27):43853-43865.
- [13] Mohr A, Deedigan L, Jencz S, et al. Caspase-10: A molecular switch from cell-autonomous apoptosis to communal cell death in response to chemotherapeutic drug treatment [J]. *Cell Death and Differentiation*, 2018(25):340-352.
- [14] Silke J, Strasser A. The FLIP side of life [J]. *Science Signaling*, 2013, 6(258):pe2.
- [15] Ram DR, Ilyukha V, Volkova T, et al. Balance between short and long isoforms of cFLIP regulates Fas-mediated apoptosis in vivo [J]. *Proceedings of the National Academy of Sciences of the United States of America*, 2016, 113(6):1606-1611.

备注/Memo: 河南省医学科技攻关计划省部共建项目 (编号: 201701028)

更新日期/Last Update: 1900-01-01