

论著

倍半萜烯内酯通过非caspase途径诱导人鼻咽癌CNE1细胞凋亡

林忠宁¹, 林育纯¹, 杨杏芬², 朱伟³, 余贵英¹, 蔡承铿¹, 魏青¹

1.中山大学公共卫生学院预防医学系, 广东 广州 510080; 2.广东省疾病预防控制中心, 广东 广州 510300; 3.广州市疾病预防控制中心, 广东 广州 510080

收稿日期 2002-11-15 修回日期 2003-4-18 网络版发布日期:

摘要 目的: 探讨半胱天冬酶(caspase)活化途径是否在倍半萜烯内酯(SLs)诱导人鼻咽癌(NPC)细胞凋亡中起作用。方法: CNE1细胞株给予SLs的活性成分parthenolide (PN)处理, 以及与caspase-3和-9特异性抑制剂联合作用进行caspase途径阻断实验, 检测细胞内caspase-9和-3活性, 观察其与细胞毒性和凋亡指标的关系。结果: PN作用后细胞TUNEL阳性率和SubG1细胞亚群增高, 细胞失贴壁率和LDH漏出率显著增加(P<0.05), 但caspase-9和-3活性未见升高。特异性抑制剂作用后caspase活性明显降低(P<0.05), 而细胞凋亡和毒性指标未见明显改变。结论: 提示PN诱导CNE1细胞凋亡作用与其细胞毒性效应有关, 与caspase活化途径无关。

关键词 [鼻咽肿瘤](#); [倍半萜烯内酯](#); [细胞凋亡](#); [半胱天冬酶](#)

PARTHENOLIDE INDUCES APOPTOSIS IN HUMAN NASOPHARYNGEAL CARCINOMA CNE1 CELL LINE VIA NON-CASPASE-ACTIVATION PATHWAY

LIN Zhong-ning¹, LIN Yu-chun¹, YANG Xing-fen², et al

1. School of Public Health, Sun Yat-sen University, Guangzhou 510080, China; 2. Center for Disease Control and Prevention of Guangdong Province, Guangzhou 510300, China

Abstract Purpose: To study whether sesquiterpene lactones(SLs) have the inducible apoptosis effect on human nasopharyngeal carcinoma (NPC) and it's relation with the mechanism of caspase activation, Methods: NPC cell line (CNE1) was treated with parthenolide(PN), the principal active component of SLs. The apoptotic cell death was indicated by morphological alterations. The inducible apoptosis and cytotoxicity effect were determined by flow cytometry, and the cellular caspase-9 and caspase-3 activity was measured by a spectrofluorometric method. Results: The TUNEL positive cell (%) and the SubG1 (%) of cell cycle distribution increased in PN treated group. Compared with the negative control, there were significant increases of detached cell ratio (%) and lactate dehydrogenase (LDH) leakage (%). However, after PN treatment, the activities of caspase-9 and -3 were not significantly increased. Combined with caspase inhibitors in blocking experiment, PN decreased the caspase-9 and -3 activity but not the apoptotic and cytotoxic index. Conclusion: It was indicated that PN is able to induce apoptosis of CNE1 cell, which may be correlated with cytotoxicity effects but not with caspase cascade activation.

Keywords [nasopharyngeal neoplasms](#) [parthenolide](#) [apoptosis](#) [caspase](#)

DOI

扩展功能

本文信息

▶ [Supporting info](#)

▶ [\[PDF全文\]\(570k\)](#)

▶ [\[HTML全文\]\(38k\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [Email Alert](#)

相关信息

▶ 本刊中 包含“[鼻咽肿瘤; 倍半萜烯内酯; 细胞凋亡; 半胱天冬酶](#)”的 [相关文章](#)

▶ 本文作者相关文章

- [林忠宁](#)
- [林育纯](#)
- [杨杏芬](#)
- [朱伟](#)
- [余贵英](#)
- [蔡承铿](#)
- [魏青](#)