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新城疫病毒7793株抑制人结肠癌LoVo细胞裸鼠移植瘤的生长及其机制 点此下载全文

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摘要：

目的：观察新城疫病毒7793株（Newcastle disease virus 7793 strain，NDV 7793）对人结肠癌LoVo细胞裸鼠移植瘤生长的作用，并探讨其可能机制。方法：建立LoVo细胞裸鼠移植瘤模型，随机分成3组，分别静脉注射PBS、5-FU以及NDV 7793，观察各组裸鼠肿瘤的生长情况，流式细胞术检测移植瘤细胞的坏死率和凋亡率，免疫组织化学法检测移植瘤组织中Bax、Bcl-2蛋白的表达，细胞色素C试剂盒检测移植瘤组织中细胞色素C的含量，ELISA法检测移植瘤组织中TNF-α含量。结果：NDV 7793较5-FU更明显抑制LoVo细胞移植瘤的生长（抑制率50.14% vs 37.14%，P<0.05）。NDV 7793组移植瘤LoVo细胞凋亡率显著高于5-FU对照组\[(28.7±1.5)% vs (1.46±0.3)%，P<0.01\]，且NDV 7793组诱导LoVo细胞的凋亡率和坏死率\[（28.7±1.5）% vs（27.80±3.32）%\]相当。NDV 7793能促进移植瘤组织中Bax蛋白的表达，对Bcl-2蛋白的表达无影响。NDV 7793可提高移植瘤组织中的细胞色素C含量\[（2.28±0.68）vs（0.68±0.13）μg/μl\]和TNF-α的水平\[（489.6±5.2）vs（167.9±3.9）pg/ml\]。结论：NDV 7793可抑制人结肠癌LoVo细胞移植瘤的生长，其机制可能与其上调Bax蛋白、细胞色素C和TNF-α的表达，以及促进肿瘤细胞凋亡有关。

关键词：新城疫病毒 结肠癌 移植瘤 凋亡 坏死

Inhibitory effect of Newcastle disease virus 7793 strain on human colon carcinoma LoVo cell-transplanted tumors in nude mice and the possible mechanism Download Fulltext

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Abstract:

Objective:To investigate the effects of Newcastle disease virus 7793 strain (NDV 7793) on the growth of human colon carcinoma LoVo cell-transplanted tumors in nude mice and the possible mechanism. Methods: Mouse models of LoVo cell-transplanted tumor were established and were randomly divided into 3 groups: intravenously injected with PBS, 5-FU and NDV 7793 groups. Tumor growth was observed in different groups, the apoptosis and necrosis rates of tumor cells were detected by FCM, expressions of Bax and Bcl-2 proteins were analyzed by immunohistochemical method, cyto-C level in tumor tissues was detected by cyto-C kit, and the concentration of TNF-α in tumor tissues was examined by ELISA. Results: NDV 7793 significantly inhibited the growth of LoVo-transplanted tumors compared with 5-FU (50.14% vs 37 14%, P<0.05). The apoptosis rate of LoVo-transplanted tumor cells in NDV 7793 group was significantly higher than that in 5-FU group (\[28.7±1.5\]% vs \[1.46±0.3\]%), and LoVo-transplanted tumor cells had a similar apoptosis rate and necrosis rate in NDV 7793 group (\[28.7±1.5\]% vs \[27.80±3.32\]%). NDV 7793 enhanced the expression of Bax, but not Bcl-2, in LoVo-transplanted tumor tissues, NDV 7793 also increased the cyto-C (\[2.28±0.68\] vs \[0.68±0.13\] μg/μl) and TNF-α levels (\[489.6±5.2\] vs \[167.9±3.9\] pg/ml) in LoVo-transplanted tumor tissues. Conclusion：NDV 7793 can inhibit the growth of human colon carcinoma LoVo cell-transplanted tumors, which may be related to the up-regulation of Bax, cyto-C and TNF-α and the subsequent apoptosis of tumor cells.

Keywords:Newcastle disease virus human colon carcinoma transplanted tumor apoptosis necrosis

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