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JNK通路及HSP70在热化疗抑制人小细胞肺癌细胞生长中的作用 [点此下载全文](#)

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摘要:

目的: 研究热化疗对小细胞肺癌生长的影响及其可能的机制。方法: 参考临床常用剂量, 采用43℃加热联合120 μg/L紫杉醇(热化联合组)、43℃加热联合120 μg/L紫杉醇及20 μmol/L JNK特异抑制剂SP600125(热化联合+SP600125组)、单纯43℃加热(单纯热疗组)、单纯使用120 μg/L紫杉醇(单纯化疗组)处理H446细胞, 以未处理的H446细胞作对照。应用四甲基偶氮唑盐比色法(MTT法)检测各处理方式下细胞增殖率的变化, 通过Western印迹法检测JNK、磷酸化JNK(p JNK)和HSP70的表达并对数据进行统计学分析。结果: 热化联合组细胞增殖率低于对照组、单纯化疗、单纯热疗及热化联合+SP600125组(P<0.05); p JNK表达水平在热化联合组中表达明显增高(P<0.05), 但SP600125可抑制其表达, 使热化联合+SP600125组细胞的增殖率相应增高(P<0.05); HSP70在热化联合组的表达低于单纯热疗组(P<0.05), 细胞增殖率也发生了相应变化。结论: 热疗可以明显增加紫杉醇对H446细胞生长的抑制作用, 且这种作用可能是通过激活JNK信号转导通路或抑制HSP70的表达完成的。

关键词: [肺肿瘤](#) [H446细胞](#) [JNK丝裂原活化蛋白激酶类](#) [热休克蛋白70](#) [温热疗法](#) [药物疗法](#) [细胞增殖](#)

Role of JNK pathway and HSP70 in thermo chemotherapy of lung cancer [Download Fulltext](#)

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Abstract:

Objective: To study the effect of thermo chemotherapy on lung cancer and its possible mechanism. Methods: H446 cells were subjected to different thermo chemotherapy strategies: 43℃+Paclitaxel (120 μg/L, thermo chemotherapy group), 43℃+Paclitaxel (120 μg/L)+SP600125 (20 μmol/L, JNK inhibitor) (thermo chemotherapy+SP600125 group), thermo chemotherapy (43℃) group, and Paclitaxel (120 μg/L) group; untreated cells served as control. MTT assay was used to measure cell proliferation and Western blotting was used to examine the expression of JNK, p JNK and HSP70 protein. Results: The proliferation rate of cells in the thermo chemotherapy group was significantly lower than those in the other 3 groups (all P<0.05). The expression of p JNK was significantly increased in the thermo chemotherapy group (P<0.05); SP600125 inhibited the expression of p JNK and the proliferation of cells in the thermo chemotherapy+SP600125 group was elevated (P<0.05). The expression of HSP70 in the thermo chemotherapy group was lower than that of the thermo chemotherapy group (P<0.05). Conclusion: Thermo chemotherapy can obviously promote the inhibitory effect of Paclitaxel chemotherapy against the growth of lung cancer cell line H446, probably through activating JNK pathway or inhibiting expression of HSP70 protein.

Keywords: [lung neoplasms](#) [H446 cells](#) [JNK mitogen activated protein kinases](#) [heat shock proteins 70](#) [thermotherapy](#) [drug therapy](#) [cell proliferation](#)

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