

Effects of hypoxia on the expression of CCR7 and proliferation, invasiveness of A549 cells

Yang LI, Qingfu ZHANG, Yang WANG, Xueshan QIU, Enhua WANG

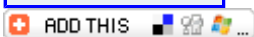
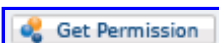
摘要

Background and objective It has been proven that hypoxia could promote tumor cells invasion and metastasis by different mechanisms, but the relationship between hypoxia and CCR7 have not been reported. The aim of this investigate is to evaluate the effects of hypoxia on the expression of CCR7 and the invasiveness of lung adenocarcinoma A549 cells. **Methods** A549 cells were incubated at either normoxia (37 °C, 5%CO₂, 21%O₂) or hypoxia (37 °C, 5%CO₂, 1%O₂) condition for 4 h, 12 h, 24 h. The expressions of CCR7 mRNA and protein levels were observed by RT-PCR and Western blotting; Cells invasiveness was measured by matrigel invasion assay. **Results** RT-PCR and Western blotting showed that the expression of CCR7 was detected in lung adenocarcinoma A549 cells, CCR7 mRNA and protein expression level were increased with culture time along either in normoxia or hypoxia condition; Furthermore, compared with normoxia group, the CCR7 mRNA and protein expression level in hypoxia group was increased (P < 0.01). The results of Transwell invasion showed that The number of invasive cells was significantly increased in hypoxia group (t = 0.006, P < 0.01) and A549 cells invasive ability was inhibited after add anti-CCR7 Ab to culture medium (t = 0.09, P < 0.01). **Conclusion** The results suggest that hypoxia plays an important role in the augmentation of the CCR7 expression and invasiveness of A549 cells. Invasion of A549 cells in hypoxia condition correlated with CCR7 expression level.






关键词

CCR7; Hypoxia; Metastasis; Invasiveness; Lung neoplasms



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ABOUT THE AUTHORS

Yang LI

Qingfu ZHANG

Yang WANG

Xueshan QIU

Enhua WANG

