

论著

衰老和低氧对体外培养大鼠肺动脉平滑肌细胞形态的影响

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摘要 目的: 探讨衰老及低氧对体外培养的PASMCS形态的影响。方法: 将细胞分为年轻常氧组、老年常氧组、年轻低氧组、老年低氧组, 应用光镜观察、免疫组化及免疫荧光的方法检查细胞的形态变化。结果: 低氧状态与常氧条件下培养的PASMCS形态上有明显差别, 且胞浆内F-actin分布及排列均有明显差别; 老年组PASMCS的 SM- α -actin 含量减少比年轻组明显; 低氧组PASMCS的SM- α -actin含量比常氧组减少明显。结论: 衰老及低氧使PASMCS形态发生变化, 均能直接刺激PASMCS的转化; 衰老的平滑肌细胞受低氧刺激, SM- α -actin变化最为明显。

关键词 [平滑肌细胞](#); [衰老](#); [缺氧](#); [SM- \$\alpha\$ -actin](#)

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Effects of aging and hypoxia on morphology of cultured rat pulmonary arterial smooth muscle cells

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Abstract

AIM: To observe the effects of aging and hypoxia on morphology of cultured rat pulmonary arterial smooth muscle cells (PASMCS).
METHODS: The cells were divided into four groups: young and normoxic group (A group), aging and normoxic group (B group), young and hypoxia group (C group), aging and hypoxia group (D group). Afterwards, the different morphological variation was observed by means of optical microscope, immune histochemistry and immune fluorescence.
RESULTS: Huge differences in morphological characters in PASMCS in hypoxia and in normoxic were observed, particularly, the difference was clearly shown in F-actin concentration and array in the cytolymph. Compared with normoxic group, the concentration of SM- α -actin in hypoxic PASMCS group decreased sharply.
CONCLUSION: Aging and hypoxia lead to morphological change in PASMCS. Both factors stimulate the phenotypic modulation in PASMCS, but the phenotypic modulation effect is more apparent in the condition of hypoxia.

Key words [Smooth muscle cells](#) [Aging](#) [Anoxia](#) [SM- \$\alpha\$ -actin](#)

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