Expression of αVβ3 in non small cell lung cancer tissue and the effect of αVβ3 knockdown on malignant biological behavior in lung cancer cell line A549

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To study the expression of αVβ3 in non small cell lung cancer tissue and the effect of αVβ3 knockdown on malignant biological behavior in lung cancer cell line A549. Methods: Lung cancer tissue and adjacent normal tissue from 100 patients with non small cell lung cancer were collected and the expression of αVβ3 were detected. Lung cancer cell line A549 were cultured and αVβ3 was knockdown by siRNA transfection. Then expression proliferation and anti-apoptosis gene, invasion and angiogenesis gene were detected. Results: (1) αVβ3 expression: mRNA and protein levels of αVβ3 in lung cancer tissue were higher than those in adjacent normal tissue; (2) proliferation and anti-apoptosis gene: mRNA and protein content of Bcl-2, Notch1, Cyclin E in treatment group cell were lower than those in control group; (3) invasion and angiogenesis genes: mRNA and protein content of cells VEGF, ICAM-1, VCAM-1 in treatment group cell were lower than those in control group. Conclusion: expression of αVβ3 in non small cell lung cancer tissue increases; αVβ3 knockdowned by siRNA can reduce the expression of proliferation and anti-apoptosis genes, invasion and angiogenesis genes, in lung cancer cell line A549.

[KEY WORDS] Non small cell lung cancer; IntegrinαVβ3; Proliferation; Invasion; Angiogenesis