Neuronatin expression and its clinicopathological significance in pulmonary non-small cell carcinoma.


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Abstract

INTRODUCTION: Neuronatin is a protein that is specifically expressed in the nervous system in the course of embryonal brain development, and its expression is limited to the pituitary gland in normal human adults. Neuronatin expression has been reported in some types of tumor. The purpose of this study was to clarify the significance of neuronatin expression in pulmonary non-small cell carcinoma.

METHODS: We determined the frequency of neuronatin expression in surgically resected samples from non-small cell lung carcinoma (51 adenocarcinoma and 41 squamous cell carcinoma) by immunohistochemical staining, and investigated the correlations between expression level and various clinicopathological features.

RESULTS: Expression of neuronatin was observed more frequently in squamous cell carcinoma (63%) than in adenocarcinoma (25%). In most cases, nontumorous lung tissue did not react with the antibody against neuronatin. In both adenocarcinoma and squamous cell carcinoma, less differentiated tumors expressed neuronatin more frequently than did differentiated tumors. In adenocarcinoma, but not squamous cell carcinoma, the prognosis of neuronatin-positive cases was significantly worse than that of neuronatin-negative cases.

CONCLUSION: Neuronatin expression is specific for tumor tissue and was detected in both pulmonary adenocarcinoma and squamous cell carcinoma at high frequency, particularly in less differentiated tumors. Neuronatin expression is associated with poor prognosis in patients with adenocarcinoma, and may be useful as a prognostic marker for lung adenocarcinoma.

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