

Expression of EpCAM protein in gastric cancer cells may contribute to its histogenesis

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ABSTRACT

Introduction: EpCAM protein belongs to adhesion molecules of epithelial cells. It mediates in the homophile adhesion cell-cell reactions. EpCAM protein expression can be observed in the majority of healthy normal cells. However, mutations in *EpCAM* gene may lead to an increased risk of cancer development. The aim of the study was to assess EpCAM protein expression in the correlation with chosen clinical and histological parameters in gastric cancer.

Materials and Methods: EpCAM protein expression was evaluated immunohistochemically in 88 patients diagnosed with gastric cancer.

Results: An increase in EpCAM protein expression was demonstrated in cancer cells compared to normal gastric mucosa (59.3% cancers with the positive expression of EpCAM protein). The increased EpCAM protein expression was observed in patients with a histological type of adenocarcinoma without a mucinous component

than in those with adenocarcinoma with a mucinous component ($p=0.028$). The higher expression of this protein was observed also in the intestinal type according to the Lauren classification ($p=0.037$). The expression of the protein was lower in the diffuse type of cancer. Additionally, an increase in EpCAM protein expression was revealed in cancers infiltrating to the blood vessels ($p=0.013$).

Conclusions: A correlation between EpCAM expression and adenocarcinoma without a mucinous component as well as the intestinal type according to the Lauren classification may prove a role of this protein in the histogenesis of gastric cancer. Moreover, its positive expression is related to cancerous cells infiltrating to the blood vessels, which may suggest a role of EpCAM protein in the early stages of gastric cancer metastases.

Keywords: adhesion, EpCAM, gastric cancer
