

Udział tkankowego inhibitora metaloproteinaz-2 (TIMP-2) w raku krtani*

Assessment of tissue inhibitor of metalloproteinases-2 (TIMP-2) in laryngeal cancer

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Summary

Metalloproteinases are the proteolytic enzymes that digest components of the extracellular matrix in many physiological and pathological conditions. Their activity is regulated by their natural inhibitors: non-specific α 2-macroglobulin and specific tissue inhibitors of metalloproteinases (TIMP). There are four TIMPs. TIMP-2 is the only enzyme that is expressed in constitutive manner and has the ability to inhibit activity of all metalloproteinases. TIMP-2 has been identified in many carcinomas including cancers of lung, oral cavity, breast and colon. There was correlation between TIMP-2 expression and clinical course of the disease observed in most of the neoplasm. **The aim** of the research was to evaluate the expression of TIMP-2 in laryngeal cancer and to assess the prognostic significance of this factor. **Material and method.** 104 patients with laryngeal cancer, that underwent surgical treatment were included in the study. Only cases with at least a 5-year follow-up were included. Immunohistochemical studies were performed on formalin fixed, paraffin embedded sections by using monoclonal antibodies against TIMP-2 antigen and ABC detection system. **Results.** TIMP-2 expression was cytoplasmatic, mainly in cancer cells, but also in some stromal cells. There was correlation between TIMP-2 expression and tumor size and grading observed. We didn't find any correlation between TIMP-2 and nodal metastases, recurrence and survival. **Conclusions:** Our results don't suggest that TIMP-2 expression may be used as a prognostic factor in patients with laryngeal cancer. Nevertheless there are more researches needed to explain the role of TIMPs in growth and progression of neoplastic tumors.