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 α2-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.