

Analiza ekspresji TIMP-1, TIMP-2 i TIMP-3 jako czynnika prognostycznego przebiegu raka krtani

Analysis of TIMP-1, TIMP-2 and TIMP-3 expression as a prognostic factor of laryngeal cancer progression

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Summary

Introduction. Tissue inhibitors of matrix metalloproteinases (TIMPs) are natural regulator of activity of matrix metalloproteinases, that are responsible for ECM degradation. TIMPs have been identified in various carcinomas and in most of them dependence between TIMPs and clinical course of the disease have been observed. **Aim.** Of the research was to evaluate expression of TIMP-1, TIMP-2 and TIMP-3 in laryngeal cancer and to assess the prognostic significance of these factors. **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-1, -2 and -3 antigens and ABC detection system. **Results.** TIMPs expression was cytoplasmatic, mainly in cancer cells, but also in some stromal cells. TIMP-1 and TIMP-2 correlated with grading (TIMP-1 $p = 0,05$; TIMP-2 $p = 0,001$). There was an association between TIMP-2 and TIMP-3 expression and tumor size (TIMP-2 $p = 0,037$; TIMP-3 $p = 0,022$). TIMP-3 expression correlated with clinical stage of the disease ($p = 0,037$). There was an association between TIMP-2 expression and nodal recurrence ($p = 0,05$). Both overall and disease-free survival were shorter in cases with positive TIMP-2 expression ($p = 0,049$). **Conclusions.** Our results demonstrate that there is an association between TIMPs expression and clinicopathological features of laryngeal cancer. Moreover TIMP-2 could be an important marker in prognosis of laryngeal cancer patients.