Assessment of apoptosis measured with TUNEL in laryngeal cancer

Wioletta Pietruszewska, Józef Kobos, Anna Wicher, Anna Murlewska, Maciej Gryczyński

**Summary**

Programmed cell death is a combined intracellular process. For the activation of apoptosis as proapoptotic genes and antiapoptotic ones are needed as well. There are several methods of apoptosis assessment but in laryngeal cancer prognostic value of apoptotic index is still unclear. 44 patients with laryngeal cancer who received surgical treatment in ENT Department of Medical University of Lodz were analysed. Apoptotic index (AI) was studied by TUNEL assay (TdT-mediated dUTP nick and labeling). There were assessed correlation between AI and primary tumor size and nodal status based on TNM system; local and nodal recurrences; and survival rate after surgical treatment. We observed significant correlation between AI and degree of neoplastic cell polymorphism (p=0.043) and tumor size (T feature) (p=0.01). IA was also significantly correlated with epiglottic site of tumor (p=0.036). There were no correlation between IA and N or M features, local and nodal recurrences or survival rate. Based on these findings we conclude that apoptosis index can be a valuable in prognostic assessment of patients with laryngeal cancer.