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PREDICTIVE IMMUNOHISTOCHEMICAL INDICATORS OF REGIONAL METASTASIS OF LARYNGEAL SQUAMOUS CELL CARCINOMA

ABSTRACT. Background. The comprehension of molecular events that underlie malignant transformation of squamous cell epithelium could not only extend the knowledge about the etiology of this process, but also is basic for predictive markers and target therapy. **Objective.** The article analyzes the predictive immunohistochemical indicators of regional metastasis of laryngeal squamous cell carcinoma. **Methods.** In the study we used the original biopsy material from 70 patients with laryngeal squamous cell carcinoma T₃₋₄N₀₋₃M₀ (69 men and 1 woman) aged from 33 to 74 during the period 2011-2014. The primary monoclonal antibodies for cyclin D1, CD34 and VEGF (TermoScientific, USA) were used. **Results.** There were significant correlation between increased expression of markers cyclin D1 (p<0,0001), VEGF (p=0,018), extension of microvessel density (p=0,032) and presence of regional metastasis of laryngeal squamous cell carcinoma. **Conclusion.** The significant increase of microvessel density and expression of VEGF and cyclin D1 markers in the laryngeal squamous cell carcinomas proves their predictive importance.

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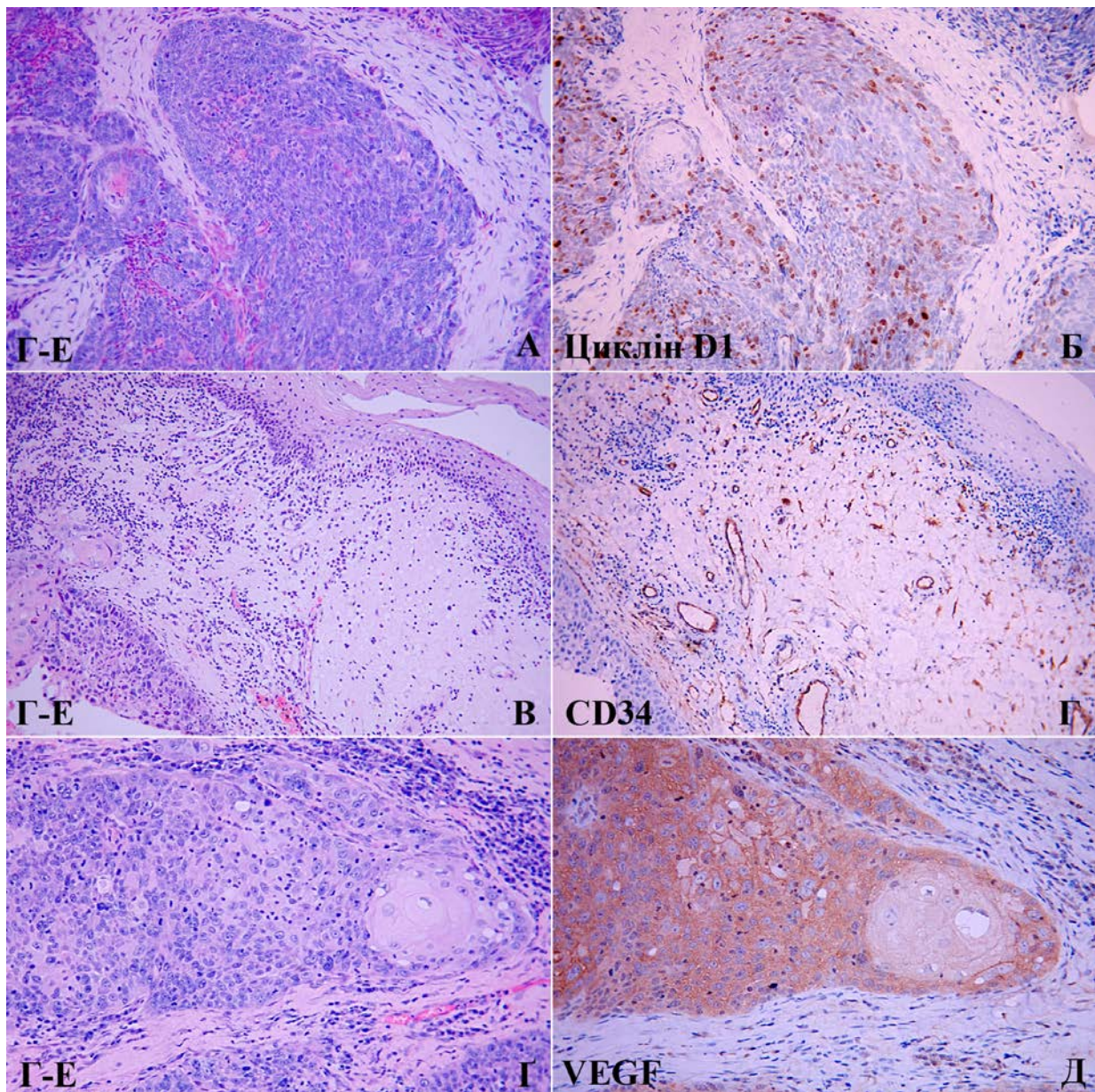


Fig. 1. А. Poorly differentiated laryngeal squamous cell carcinoma ($\times 200$). Б. Intranuclear reaction of keratinocytes with cyclin D1 marker ($\times 200$). В. Desmoplastic stroma of laryngeal squamous cell carcinoma, note on the left the area of invasion with demarcation zone of lymphocytic infiltrate ($\times 200$). Г. Membrane reaction of the vascular endothelium in stroma of squamous cell carcinoma with the CD34 marker (there are much more of them than it seems on the section stained with Hematoxylin and Eosin) ($\times 200$). Г. Moderately differentiated laryngeal squamous cell carcinoma with cornification and lymphocytic infiltration ($\times 400$). Д. Strong cytoplasmic expression of VEGF (decreased intensity of staining in the area of the 'cancer pearl') ($\times 400$). А, В, Г – Hematoxylin&Eosin staining. Б, Г, Д – immunohistochemical method, additional staining with Mayer's hematoxylin.

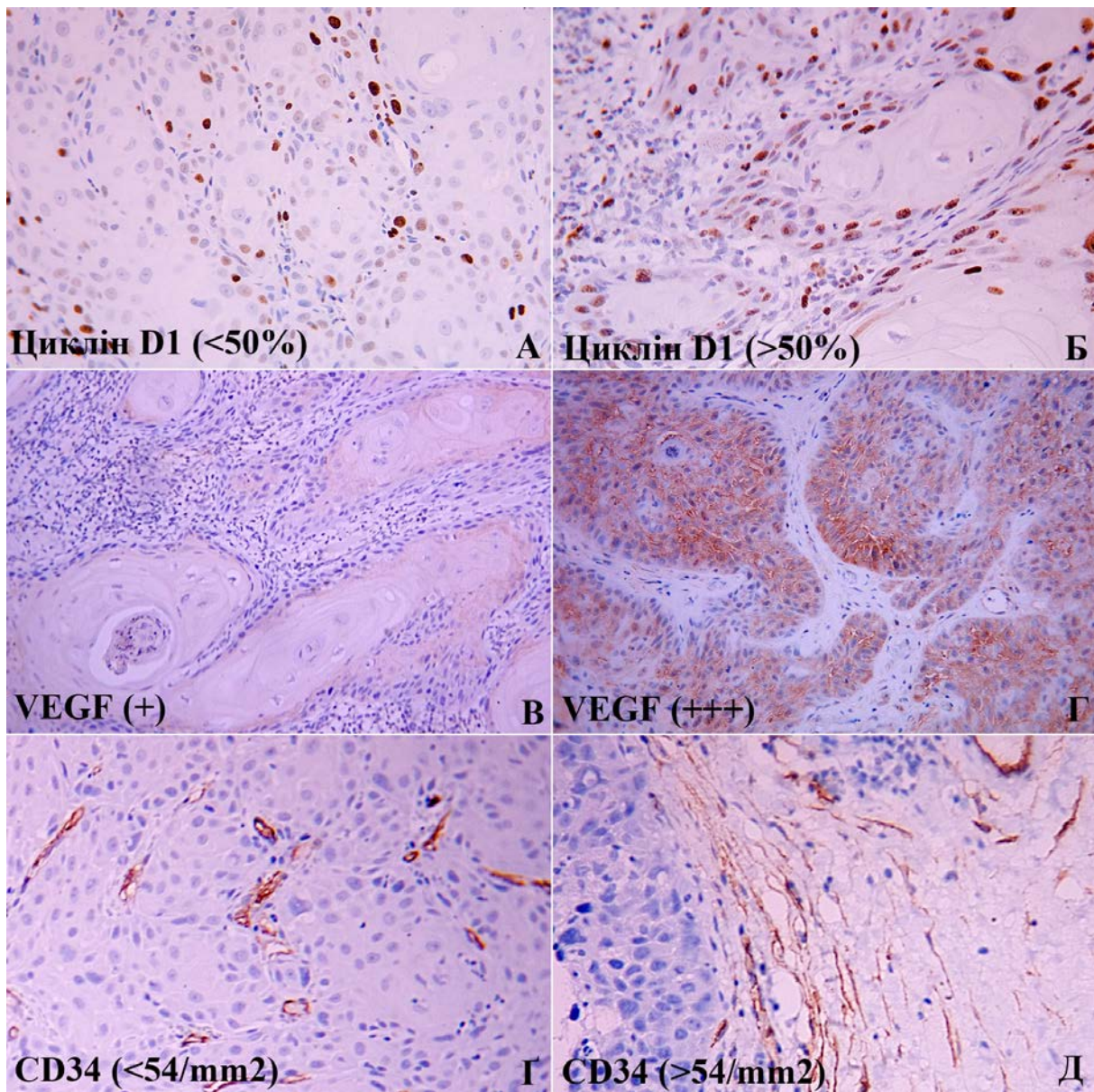


Fig. 2. А, Б. Intranuclear reaction of keratinocytes with cyclin D1 marker ($\times 200$). В, Г. Cytoplasmic expression of VEGF of different intensity ($\times 200$). Г, Д. Membrane reaction of the vascular endothelium in stroma of squamous cell carcinoma with the CD34 marker ($\times 400$). Immunohistochemical method, additional staining with Mayer's hematoxylin.

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