

Abstract

This doctoral thesis deals with morphological and immunohistochemical analysis of melanocytic lesions. Melanoma is the most dangerous malignant skin tumor with its potential occurrence outside the skin. Its early diagnosis is the basic aspect of a favorable disease prognosis. Distant metastases development occurring several years after the initial diagnosis is a typical feature of melanoma.

Histopathological differential diagnostics of melanocytic lesions is extremely difficult because of the diversity of melanocytic lesions. Contemporary research is focused on the identification of new surrogate markers based on immunohistochemistry or molecular genetics, which would be able to estimate the behavior of a certain lesion and clarify the gray zone of melanocytic lesions of uncertain biological behavior.

The doctoral thesis is focused on the immunohistochemical analysis of GLUT-1 protein expression in 400 cases of benign and malignant melanocytic lesions. Significant expression of this marker was identified in the group of melanomas, it was not identified in melanocytic nevi. Expression of GLUT-1 corresponded to the worse prognosis of the disease.

The doctoral thesis also deals with the issue of TILs. The analysis of TILs (tumor infiltrating lymphocytes) in 213 melanomas compared the prognostic significance of 5 different scoring systems. The distribution and the density of the inflammatory infiltration were assessed in HE staining. Statistical significance regarding its prognostic value was identified in three from five scoring systems.

Key words: melanocytic lesion, melanoma, immunohistochemistry, tumor infiltrating lymphocytes, GLUT-1, prognosis