

Evaluation of angiogenesis in colorectal carcinoma by CD34 immunohistochemistry method and its correlation with clinicopathologic parameters

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Abstract

The basic pathogenic step in the process of tumor growth, invasion and metastasis is tumor-induced angiogenesis. The aim of this study was to evaluate the angiogenesis in colorectal carcinoma by microvascular density (MVD) determination with IHC (immunohistochemistry) method and to determine if and how angiogenesis correlates with clinicopathologic parameters. Sixty two archival, paraffin embedded tissue samples of colorectal carcinoma from Omid Hospital (Mashhad, Islamic republic of Iran) were selected. Microvessels were identified immunohistochemically, using monoclonal CD34 antibody. Two investigators examined the microvessel density then the median value of MVD was determined and correlated with clinicopathologic parameters. Tumor-induced angiogenesis of colorectal carcinoma statistically correlated with histological tumor grade ($P=0.000$). There was no significant correlation between intratumoral microvessel density and sex and age of patients, localization, and stage and histological tumor type ($P > 0.05$). Intratumoral microvessel density quantification in histologic specimens of colorectal carcinoma reflects the grade of tumors and may be a useful additional prognostic factor. © 2009 Tehran University of Medical Sciences. All rights reserved.

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