Tumor/normal counterpart microvessel density ratio has a better correlation with clinicopathologic parameters in endometrial carcinoma than tumor microvessel density alone

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摘要

Abstract

Objective

Angiogenesis is essential for tumor growth and metastasis. Angiogenesis regulators, which are controlled by ovarian hormones, play an important role during endometrial carcinogenesis. The study evaluated the relationship between angiogenesis and clinicopathologic parameters, and the possible regulatory roles of estrogen receptor (ER) and progesterone receptor (PR) status in the angiogenesis of endometrial carcinoma.

Materials and Methods

Twenty patients undergoing surgery for endometrial carcinoma were enrolled. The microvessel density (MVD) of the excised tumor was assessed immunohistochemically. The relationships between the tumor MVD (MVD-T) and tumor/normal counterpart MVD ratio (MVD T/N ratio) and clinicopathologic parameters, including histologic grade, myometrial invasion, cervical involvement, lymph node involvement, lymphovascular space involvement, menopausal status, histologic type, stage, and ER and PR status, were analyzed.

Results

The relationships between MVD (× 200 fields) and clinicopathologic parameters were not significantly different in the 20 patients when only tumor lesions were counted. However, several clinicopathologic parameters were significantly different when MVD was measured

as the T/N ratio. The MVD T/N ratios were significantly higher in tumors of histologic grades 2 and 3, with lymphovascular space involvement, and of serous type, when compared, respectively, with tumors of histologic grade 1 (1.31 vs 1.07, $p = 0.010$), with no lymphovascular space involvement (1.32 vs 1.13, $p = 0.029$), and of endometrioid type (1.48 vs 1.13, $p = 0.021$). MVD T/N ratios were higher in ER-negative, PR-negative and both receptor-negative tumors compared with ER- positive, PR-positive and both receptor-positive tumors (1.33 vs 1.02, $p = 0.002$).

Conclusion

There was a better correlation between MVD T/N ratios and clinicopathologic parameters, even taking into account the inborn heterogeneity characteristics of endometrial cancer and the limited case number. Anti-angiogenesis factors may have a close relationship with ovarian hormone receptor status in the different pathogeneses of endometrial carcinoma.