A Trial of Anti-Angiogenic Therapy in Gynecologic Cancer

—Review Article—

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Abstract: Angiogenesis, the formation of new blood vessels, is essential for both tumor growth and metastasis. Many gynecologic cancers, especially sarcomas and carcinosarcomas, are highly angiogenic tumors and thus patients with these tumors tend to show an aggressive clinical behavior. Numerous classes of molecules have been implicated in regulating angiogenesis and thus, novel agents that target and counteract biologic mechanisms are now being developed. Anti-angiogenic agents have also been evaluated for gynecologic cancers *in vitro* and *in vivo*. TNP-470, an anti-angiogenic agent (synthetic derivative of the antibiotic fumagillin), showed an inhibition of growth in various types of gynecologic cancers, but only in a limited number of patients with advanced cervical cancer in a clinical trial. Phase Ⅱ studies using Thalidomide in patients with epithelial ovarian cancers or sarcomas are now in progress as clinical trials. In this paper, the recent experimental data and clinical trials performed to evaluate anti-angiogenic therapies for gynecologic cancers are reviewed.

Key words: angiogenesis, anti-angiogenic therapy, TNP-470, vascular endothelial growth factor (VEGF), endometrial cancer, uterine sarcoma, cervical cancer, ovarian cancer