Leukemia and Lymphoma
Volume ٤٩, Issue ٢, February ٢٠٠٨, Pages ٢٦٥-٢٧٠

Increased microvessel density in involved organs from patients with HTLV-I associated adult T cell leukemia lymphoma

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Abstract

Adult T-cell leukemia-lymphoma (ATLL) is a rapidly progressive lymphoproliferative disorder secondary to infection with the human T cell lymphotropic virus type I (HTLV-I). The role of angiogenesis in the development and prognosis of many hematologic malignancies is established. We have previously shown that ATLL derived cells secrete high levels of vascular endothelial growth factor (VEGF) and basic fibroblast growth factor (b-FGF), induce endothelial tube formation in vitro and establish functional gap junction-mediated communication with endothelial cells. We also demonstrated that plasma from ATLL and tropical spastic paraparesis/HTLV-I associated myelopathy patients exhibit very high levels of VEGF and b-FGF. Recently, we showed that treatment with the combination of zidovudine and interferon alpha reduced both HTLV-I proviral load and importantly VEGF plasma levels suggesting a potential anti-angiogenic effect of this therapy. In this report, we evaluated microvessel density (MVD) in involved organs from ٢٠ patients with ATLL, as compared to normal organs from matched controls. We show evidence of significantly increased MVD in all tested involved organs from ATLL patients, suggesting that angiogenesis plays an important role in the development or organ invasion of ATLL, and could represent a potentially interesting target for anti-angiogenic therapy of ATLL.

Reaxys Database Information

Author keywords

Angiogenesis; ATLL; HTLV-I; Microvessel density; VEGF

Indexed Keywords

EMTREE drug terms: alpha interferon; angiogenesis inhibitor; basic fibroblast growth factor; vasculotropin; zidovudine

EMTREE medical terms: adult; aged; angiogenesis; antiangiogenic activity; article; bone marrow; clinical article; colon; controlled study; female; human; Human T cell leukemia virus ١; human tissue; lymph node; male; microvasculature; pathogenesis; priority journal; protein blood level; skin; spastic paraplegia; spinal cord disease; T cell leukemia; T cell lymphoma; vascular endothelium; virus infection; virus load

MeSH: Adult; Aged; Bone Marrow; Capillaries; Case-Control Studies; Female; Human T-lymphotropic virus ١; Humans; Immunohistochemistry; Leukemia-Lymphoma, Adult T-Cell; Lymph Nodes; Male; Middle Aged; Neovascularization, Pathologic; Skin; Testis
Medline is the source for the MeSH terms of this document.