

Angiogenesis in cancer of unknown primary: clinicopathological study of CD34, VEGF and TSP-1.

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Source

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Abstract

BACKGROUND:

Cancer of unknown primary remains a malignancy of elusive biology and grim prognosis that lacks effective therapeutic options. We investigated angiogenesis in cancer of unknown primary to expand our knowledge on the biology of these tumors and identify potential therapeutic targets.

METHODS:

Paraffin embedded archival material from 81 patients diagnosed with CUP was used. Tumor histology was adenocarcinoma (77%), undifferentiated carcinoma (18%) and squamous cell carcinoma (5%). The tissue expression of CD34, VEGF and TSP-1 was assessed immunohistochemically by use of specific monoclonal antibodies and was analyzed against clinicopathological data.

RESULTS:

VEGF expression was detected in all cases and was strong in 83%. Stromal expression of TSP-1 was seen in 80% of cases and was strong in 20%. The expression of both proteins was not associated with any clinical or pathological parameters. Tumor MVD was higher in tumors classified as unfavorable compared to more favorable and was positively associated with VEGF and negatively with TSP-1.

CONCLUSION:

Angiogenesis is very active and expression of VEGF is almost universal in cancers of unknown primary. These findings support the clinical investigation of VEGF targeted therapy in this clinical setting.