学 位 論 文 の 要 旨

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論文の題名

CXCL5, a promoter of cell proliferation, migration and invasion, is a novel serum prognostic marker in patients with colorectal cancer

主論文の要旨

PURPOSE: Serum CXCL5 levels in colorectal cancer (CRC) patients were assessed to evaluate correlation with clinicopathologic features and prognosis. The effects of CXCL5 on CRC cells were investigated in vitro.

METHODS: Based on cytokine array analysis, CXCL5 was identified as a novel prognostic serum marker. Serum levels of CXCL5 were assessed in 250 CRC patients and 33 normal volunteers by enzyme-linked immunosorbent assay (ELISA), and their relation to clinicopathologic findings and survival investigated. CXCL5 levels in CRC cell lines were also measured by ELISA, and CXCL5 and CXCR2 expression was evaluated by immunohistochemistry. Recombinant human CXCL5 and CXCR2 neutralisation antibodies were used for proliferation, migration and invasion assays.

RESULTS: Preoperative serum CXCL5 was significantly elevated in CRC patients compared with healthy volunteers. High serum CXCL5 was significantly associated with liver metastasis. Multivariate analysis showed that elevated CXCL5 was a significant and independent prognostic factor of survival in CRC patients. CRC cells secreted CXCL5, and administration of recombinant human CXCL5 promoted proliferation, migration and partial invasion. These effects were generally inhibited by CXCR2 neutralisation antibody.

CONCLUSIONS: Preoperative serum CXCL5 could serve as a novel predictive marker for prognosis determination of CRC patients. CXCL5/CXCR2 axis might be associated with colorectal cancer progression.