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Is VEGF a target molecule for peritoneal dissemination and malignant ascites in gastric cancer?

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In gastric cancer, the most critical factor responsible for poor prognosis is peritoneal dissemination which often accompany with malignant ascites. The aim of the current study is to search the target molecule for peritoneal dissemination and investigate its application as a biomarker in clinical state. Biopsy specimen from peritoneal dissemination, and if possible, malignant ascites were obtained from 40 gastric cancer patients. The expression of VEGF was analyzed by immunohistochemical staining. To measure VEGF in ascites and plasma, a quantitative sandwich enzyme-linked immune-sorbent assay technique was used. The incidence of VEGF expression was 70% in the peritoneal dissemination. Thirty-five patients were divided into two groups according to whether ascites was found beyond pelvic cavity or not. There was no significant difference between the small group and the large group according to the plasma level of VEGF. However, the ascites level of VEGF in the large group was significantly higher than in the small group ($p=0.0358$). There was a good correlation of VEGF level between plasma and ascites in the large groups ($r=0.686$). There was no correlation between the value of VEGF and prognosis. VEGF may play an important role in the progression and invasion of gastric cancer and formation of peritoneal dissemination. VEGF is also correlated with accumulation ascites by increasing vascular permeability. These results supported that anti-VEGF therapy is an expected to be a promising therapy, however, to measure VEGF in ascites and plasma is not important as a biomarker for the patients with peritoneal dissemination in gastric cancer.

Biography

Fushida has completed his Ph.D. at the age of 30 years from Kanazawa University. He is the director of upper GI tract surgery in Kanazawa University Hospital. He has specialized in gastric cancer treatment. He has published more than 200 papers in reputed journals.

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