The proper regime for this patient is

Case 382

1. XELOX + Bevacizumab

【Progress】

He was given XELOX + Bez. Seven months later, marked shrinkage of metastatic lung tumor and metastatic liver cancer was shown on CT (Figs 3, 4). Laboratory test seven months later revealed CEA 4.9 ng/mL, CA19-9 13 U/mL.

【Discussion】

In 1970ies when I studied medical medicine, of all cancers in Japan, the number of gastric cancers was the highest. Meanwhile, at present time of 2020ies in Japan, the number of patients with colon cancers is the highest: the number of patients with prostate cancer is the highest in man, while that of breast cancer is the highest in woman (1). Of all cancer death patients in Japan, colon cancer death patients are the second in number following lung cancer death patients: the number of patients with lung cancer is the highest in man, while that of colon cancer is the highest in woman (1, 2). It is therefore imperative to control colon cancer to decrease total number of cancer deaths.

Various chemotherapies for colon cancer are being attempted. At present, the combination of both XELOX and Bevacizumab is highly evaluated (2). XELOX is a mixed word of XELODA and OXAPLATIN.

XELODA, capecitabine is improved 5FU. 5FU is uracil analogue that inhibits the uptake of uracil to DNA and RNA. DNA is a nucleotide composed of adenine, cytosine, guanine, and thymine. Thymine is synthesized by uracil. RNA is a nucleotide composed of adenine, cytosine, guanine, and uracil. Then, 5FU is an inhibitor of uracil to make DNA and RNA. Once, 5FU is directly given which induces liver dysfunction and appetite loss. To reduce the degree of side effects, XELODA, capecitabin is improved from 5FU for being easily absorbed to digestive organ, metabolized without liver dysfunction, and transformed to 5FU in the tumor itself (2).

OXAPLATIN is platinum preparation which connects DNA directly and blocks separation of DNA chain, inducing inhibition of DNA replication. Once cisplatin that induced to renal toxicity, was used. OXAPLATIN is improved to being less renal toxicity than cisplatin, remaining inhibitory efficacy of DNA replication (2).

Bevacizumab is a VEGF (vascular endothelial growth factor) inhibitor. VEGF is secreted from tumor that plays a role of proliferation of endothelial cells and new vessels, and promotion of permeability of vessels, implying essential to tumor growth (4, 5). Further, VEGF plays a role of strengthening immune checkpoints: direct suppression of cytotoxic T cell function and indirectly suppression of cytotoxic T cell via promotion of regulatory T cell function and promotion of myeloid-derived suppression cells that repress cytotoxic T cell (6-9).

The combination of both XELOX and Bevacizumab is more effective than XELOX alone with points of over all survivals and tumor progression-free survivals (4). In our case, the combination of both XELOX and Bevacizumab brings about marked tumor regression at time of seven months later.

【Summary】

We presented a fifty-seven-year-old male with sigmoid cancer associated with metastatic lung tumors and metastatic liver tumors. He was given XELOX (XELODA) and Bevacizumab, inducing marked shrinkage of tumors and remarkable decrease of tumor markers of CEA and CA19-9. It is borne in mind that XELODA is an improved 5FU preparation for less appetite loss and less liver dysfunction. OXAPLATIN is platinum preparative that improves less renal toxicity than cisplatin. Bevacizumab is an inhibitor to VEGF (vascular endothelial growth factor) that promotes formation of new tumor vessels and suppression to cytotoxic T cell function. The combination of XELOX and Bevacizumab brought about remarkable effectiveness for our patient.

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