Leptomeningeal carcinomatosis of gastric cancer: Multi-center retrospective analysis of 54 cases

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Background: Leptomeningeal carcinomatosis occurs in approximately 5% of patients with cancer. The most common cancers involving the leptomeninges are breast and lung cancer. However, gastric adenocarcinoma has been rarely reported with leptomeningeal carcinomatosis (LMC). Methods: We analyzed 54 cases of cytological confirmed gastric LMC at 4 institutions from 1994 to 2007. Results: Male to female ratio was 1.5:1. Median age of these patients was 49 years (range, 28-78 years). The majority of patients had advanced disease at the initial diagnosis of gastric cancer. The clinical or pathologic TNM stages of the primary gastric cancer were IV in 38 patients (70%). The median interval from the diagnosis of the primary malignancy to the diagnosis of LMC was 6.3 months (range, 0 - 73.1 months). Of the initial endoscopic finding available 45 patients, Bormann type III and IV were 23 (51%) and 15 (33%) patients, respectively. Pathologically, 94% of cases proved to be poorly differentiated adenocarcinomas. Signet ring cell component also were observed in 40%. Headache (85%) and nausea/vomiting (58%) were most common presenting symptoms of LMC. A gadolinium-enhanced MRI was performed in 51 patients. Leptomeningeal enhancement was observed in 45 cases (82%). The intrathecal (IT) chemotherapy was administered to 36 patients - mainly with methotrexate alone (59%) or combination with ara-C/hydrocortisone (41%). Median IT treatment number was 7 (range, 1-18). Concomitant radiotherapy or chemotherapy was done in 25 patients and 10 patients, respectively. 17 patients (46%) were achieved cytological negative conversion. Median OS duration from diagnosis of LMC was 6.7 weeks (95% CI, 4.3-9.1 weeks). Clinically, initial advanced stage was predictive value of poor prognosis (P=0.009). But, Cytology negative conversion was predictive value of relatively longer survival duration (P=0.005). And, not only IT chemotherapy but also intravenous chemotherapy had been shown improvement of survival duration (P=0.010, P=0.005, respectively). Conclusion: Although gastric LMC has dismal prognosis, IT and IV chemotherapy could be help to extend survival duration of gastric LMC.

Phase II trial of neoadjuvant fixed dose rate gemcitabine with capecitabine combination chemotherapy in locally advanced pancreatic adenocarcinoma

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Purpose: To determine the efficacy and safety of fixed dose rate (FDR) gemcitabine and capecitabine (GX) combination chemotherapy for locally advanced pancreatic adenocarcinoma (LAPA). Patients and Methods: Patients with histologically confirmed LAPA were eligible for this trial. Dynamic pancreas/pelvic CT, Gd-enhanced MRCP/A, and FDG-PET were undertaken to assess the resectability. ‘Borderline resectable (BR)’ and ‘unresectable (UR)’ criteria developed by our pancreatico-biliary multidisciplinary management team (PBMMT) and NCCN criteria were used. After confirmation of resectability by PBMMT, patients received 3 cycles of FDR gemcitabine 1, 250 mg/m2 on D1 and D8 and capecitabine 950 mg/m2 from D1-D14 every 3 weeks. Staging was repeated and patients underwent surgery if the disease was not unresectable. For patients with R0 resection, additional 6 cycles of GX were administered. For patients with R1/R2 resection, chemoradiotherapy (CRT) followed by FDR-GX was administered. Patients with stable or better response to GX but assessed unresectable at reassessment received additional chemotherapy up to 9 cycles followed by CRT. Results: Between Aug 2006 and Jul 2008, 36 eligible patients (12 BR and 24 UR based on NCCN criteria; 26 BR and 10 UR based on our PBMMT criteria) entered on this study. Pretreatment TNM stages were as follows: cT3N0(n=3), cT4N0(n=12), cT3N1(n=7), and cT4N1(n=14). Four patients are being treated with GX at the time of analysis and excluded from the efficacy analysis. The response to neoadjuvant GX was PR in 6 (18.8%) and SD in 23 (71.9%). Metabolic response was achieved in 20 patients (66.7%) with 2 metabolic CR. Grade 3 or worse adverse effects were mainly HFS (n=4) and gastrointestinal (n=3) with no grade 4 in severity. Surgery was performed in 8 patients (25.0%, R0=7, R1=1, 5 in NCCN-BR and 3 in NCCN-UR) and five patients refused surgery although their diseases seemed not to be unresectable. The median PFS was 9.4 months (95% CI, 8.4-10.3) and estimated median OS was 13.5 months (95% CI, 11.2-15.8) with 1-year survival rate of 76%. Conclusion: FDR-GX was effective as neoadjuvant therapy in LAPA with favorable toxicity profile. Mature data will be presented in the meeting.