[Case Report]

Far-advanced gastric carcinoma successfully treated by combination chemotherapy with 5-fluorouracil and low-dose cisplatin: report of a case

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(Received April 19, 2004, Accepted July 21, 2004)

SUMMARY

We present a case of far-advanced gastric carcinoma treated effectively by combination chemotherapy of 5-fluorouracil (5-FU) and low-dose cisplatin (CDDP). A 61-year-old man underwent palliative distal gastrectomy under the diagnosis of gastric carcinoma with metastasized Virchow's and abdominal lymph nodes. After surgery, continuous infusion of 5-FU and low-dose CDDP infusion was performed. CT performed 5 months after the operation revealed no lymphadenopathy in the abdomen. Swelling of Virchow's node became unpalpable 3 months after the start of chemotherapy. He died of liver metastasis 3 year and 11 months after the operation. Treatment of advanced gastric carcinoma by this protocol might provide favorable results.

Key words: Gastric carcinoma, Chemotherapy, Virchow's lymph node

I. Introduction

Since gastric cancer is believed to be more sensitive to chemotherapeutic agents than other intraabdominal adenocarcinomas, the use of chemotherapy in its treatment has been receiving a lot of attention. Several combination chemotherapies with high response rates for advanced gastric cancer have recently been reported[1,2]. We report herein a case of advanced gastric carcinoma with metastasized Virchow's and abdominal lymphnodes that was treated effectively by combination chemotherapy of 5-fluorouracil (5-FU) and low-dose cisplatin (CDDP) after pal-
liative distal gastrectomy.

II. Case

A 61-year-old man was hospitalized for epigastralgia on March 2, 1998. Physical examination revealed anemia, swelling of his left supraclavicular lymph nodes, and slight tenderness on the epigastrium. Laboratory data on admission: serum total protein 5.9 g/dl, albumin 3.1 g/dl, carcinoembryonic antigen 1.7 ng/ml, hemoglobin 10.2 g/dl, hematocrit 30.6%. Chest X-ray revealed no abnormal shadow in the lung fields. Cervical ultrasonography demonstrated swelling of left supraclavicular lymph nodes (Fig. 1). An upper gastrointestinal X-ray (Fig. 2) and endoscopic examination disclosed a type 3 gastric cancer according to Borrmann’s classification from the lower body to the duodenum. The histopathology of the tumor biopsy showed moderately differentiated adenocarcinoma. Abdominal computed tomography (CT) disclosed thickened stomach wall and lymphadenopathy along the aorta and celiac trunk (Fig. 3). There were no abnormal findings in the liver. Under the diagnosis of advanced gastric carcinoma with metastasized Virchow’s and abdominal lymph nodes, palliative distal gastrectomy with a Billroth II anastomosis was performed on March 16, 1998 in order to prevent passage disturbance and bleeding from the tumor. At surgery, there were no ascites, peritoneal disseminations, or liver metastases and invasions to other organs. Sampling of lymph nodes along the left gastric artery was performed, but lymph nodes along the celiac trunk, common hepatic artery and aorta, and those in the hepatoduodenal ligament, most of which seemed metastatic macroscopically, were not dissected. Grossly, a type-3 tumor on the side of lesser curvature, measuring 10 × 8.5 cm in diameter, was recognized. Microscopic examination of the tumor revealed moderately differentiated tubular adenocarcinoma with serosa penetration. There were severe lymphatic and vascular invasions. Eight out of 15 lymph nodes along the curvature and one lymph node sized 2.5 cm near the left gastric artery showed metastatic adenocarcinoma.

From a week after operation, obstructive jaundice was appeared. Serum total bilirubin and direct bilirubin had increased to 11.6 mg/dl and 5.8 mg/dl, respectively, 2 weeks post-
operation. Percutaneous transhepatic biliary drainage (PTBD) was performed on April 1, 1998. Cholangiography indicated obstruction of the common hepatic duct (Fig. 4a). Combination chemotherapy consisting of 5-FU at 500 mg/body/day, daily for 28 days of continuous intravenous infusion, and CDDP at 8 mg/body/day, infused for 2 hours five times a week for 4 weeks (5-FU and low-dose CDDP), was started 1 month after the operation. After the course of chemotherapy, common hepatic duct obstruction was improved (Fig. 4b). For the purpose of preventing re-obstruction, a metallic expandable stent (Accuflex, Boston Scientific, USA) was inserted through the PTBD tract. The patient was discharged 2.5 months after surgery.

CT performed 4 months after the start of chemotherapy revealed no lymphadenopathy in the abdomen (Fig. 5). Swelling of Virchow's node diminished gradually and became unpalpable 3 months after the start of chemotherapy. Chemotherapy of the same regimen was performed four times — every 6 months. A good quality of life was retained during therapy, but
the patient died of liver metastasis 3 years and 11 months after the operation.

III. Discussion

The prognosis of patients with advanced gastric cancer is still poor despite recent advances in early detection and surgical treatment, and development of effective treatments for such patients has been eagerly awaited. Several combination regimens of chemotherapy that include 5-fluorouracil, doxorubicin, etoposide, mitomycin C, and CDDP have been reported for the treatment of advanced gastric cancer. Until recently, the combination of 5-FU, adriamycin, and mitomycin C (FAM) was one of the most widely used chemotherapy regimens for gastric carcinoma[3], but its use has decreased because of the results of randomized studies demonstrating its inferiority to the combination of 5-FU, adriamycin, methotrexate (FAMTX)[4]. Like FAMTX, newer regimens such as etoposide, doxorubicin, and CDDP (EAP) have been reported to produce higher response rates than FAM[5]. However, as the adverse effects of these two regimens are severe and frequent[6], the search for new ones has been vigorously continuing. Combination chemotherapy with CDDP and 5-FU is the biochemical modulation that possesses synergistic cytotoxicity. Clinical trials and experimental in vitro and in vivo studies have documented that 5-FU and CDDP act synergistically against gastrointestinal cancers [7]. The mechanism for this depends not only on the action of CDDP as a modulator of 5-FU, but also on a mutual biochemical modulation in which 5-FU acts a modulator of CDDP and enhances its effect[8]. Some studies have reported that this regimen showed high response rates and a low incidence of toxicities. Lacave et al[9] demonstrated that combination chemotherapy with CDDP and 5-FU achieved a 41% response rate in patients with advanced gastric carcinoma and that leukopenia and thrombocytopenia were mild (only 2% had grade 3). Ohtsu et al[10], using infusional 5-FU combined with CDDP for advanced gastric cancer, reported a high response rate of 43%, with leukopenia and thrombocytopenia being observed in 18% and 7%, respectively.

Virchow's node metastasis connotes a poor prognosis with practically no possibility of curative treatment[11]. Also, metastatic lymph nodes along the hepatoduodenal ligament from gastric cancer signifies advanced incurable disease. Chu et al[12] reported a median survival of 41 patients with extrabiliary obstruction by metastatic gastric carcinoma of only 70 days, with 6- and 9-month survival rates of 27.0% and 9.7%, respectively. Kim[12] and associates reported a median survival of patients with recurrent metastatic gastric carcinoma treated with biliary drainage alone of 2 months. As for the present case, better prognosis than expected was achieved by the chemotherapy. Median survivals of studies on combination chemotherapy with CDDP and 5-FU that obtained high response rates for advanced gastric carcinoma were 7-10.3 months[9,10,13]. It has been reported that continuous infusion of 5-FU and low-dose CDDP is effective especially for lymph node metastasis of gastric cancer[9,13,14]. Nonetheless, the reason why this therapy was so effective in
the present case is unclear.

In conclusion, we report a case of far-advanced gastric cancer that survived for 3 years and 11 months after the palliative gastrectomy. Continuous infusion of 5-FU and low-dose CDDP infusion might contribute to an improvement in the prognosis of some patients with far-advanced gastric cancer.

要旨
胃癌でVirchowリノンパ節転移を伴う場合は予後不良とされているが、Low-Dose FP療法（5-FU+低用量CDDP）が奏効して、長期生存が得られた例について報告した。症例は61歳、男性。心窩部痛を主訴に当科を受診した。検診にて、内視鏡所見にて胃腫瘤の1例を経験した。圧迫は左、男性。心窩部痛を主訴に当科を受診した。眼瞼結膜に貧血、左鎖骨上リンパ節を触れる触知した。内視鏡下に、体部から十二指腸降部および小腸を中央部とする3/4周性のBorrmanのリンパ節腫大を認めた。CTでは腹腔内リンパ節腫大および大動脈腫の腫大を認めた。Virchowリノンパ節転移、および著明な腹腔内リンパ節転移を伴った進行胃癌と診断し、胃瘻側胃切除術を施行した。病理組織学的には分化腺癌、深部浸潤であった。術後2週に左十二指腸降部腫内リンパ節転移による隆起性腫瘍が出現したため、PTBDと施行。胆管造影では上部胆管での完全閉塞を認めた。減数の後、化学療法として、Low-Dose FP療法を施行した。1クール施行後の胆管造影で胆管の再開通を認めた。再開通後3ヶ月で触知しなくなった。術後3年11ヶ月間生存したが、肝転移のため死亡した。

References


