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# An advanced gastric cancer with peritoneal dissemination: Complete response achieved with FLOT combination chemotherapy



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## ABSTRACT

**Introduction:** Although chemotherapy is the first recommended treatment of metastatic gastric cancer, a complete response is a rare event.

**Case:** A 56-year-old male was diagnosed as gastric cancer with gastric outlet obstruction, large bowel obstruction and peritoneal dissemination. The patient underwent gastrojejunostomy bypass and ileostomy diversion, and chemotherapy with FLOT (5FU,

leucovorin, oxaliplatin, docetaxel) regimen subsequently. After 6 courses of chemotherapy, a computed tomography showed disappearance of gastric mass and disseminated nodules in pelvic cavity, and no visible lesion in gastric mucosa, suggesting a complete clinical response.

**Conclusion:** FLOT regimen in our case succeed to achieve complete clinical response.

**Keywords:** advanced gastric cancer, complete response, chemotherapy.

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## INTRODUCTION

The prognosis of stage IV gastric cancer is unfavorable because of only 15% chance of survival in 5 years.<sup>1</sup> According to the guidelines, chemoradiation or systemic chemotherapy or best supportive care are the recommended treatment of unresectable or metastatic gastric cancer based on clinical trials.<sup>2,3</sup> The clinical response rate reported for chemotherapy for unresectable advanced or recurrent gastric cancer is 28-54%.<sup>4,5</sup> Oral 5-FU was considered gold standard until several combined chemotherapy regimens give good response for unresectable gastric cancer.<sup>6,7</sup> Herein, a stage IV gastric cancer achieved clinical complete response by chemotherapy with FLOT regimen.

## CASE PRESENTATION

A 56-year-old male presented with gastric outlet obstruction and weight loss to our hospital. An upper gastrointestinal study showed a dilated stomach with a minimal amount of contrast passed to duodenum, and contrast retention in 4 hours after ingestion. Upper gastrointestinal endoscopy revealed numerous longitudinal ulcers in distal esophagus, food residue in stomach, hyperemia and swollen mucosal gastric corpus, giant ulcer with suspicious mass in the prepyloric region (Figure 1, 2, and 3).

Pathological examination of biopsy specimen revealed well-differentiated adenocarcinoma. Computed tomography (CT) showed pyloric wall thickening with fat stranding and dilated stomach (Figure 4). Also, multiple nodules in the rectovesical pouch (Blumer's shelf) were observed with rectal contrast show obstruction at the level of rectosigmoid, and bilateral moderate hydronephrosis and hydroureter (Figure 5). Colonoscopy showed no intraluminal mass, with oedematous mucosa produce luminal narrowing in 25-40 cm from anal verge, and the scope couldn't advanced. Barium enema showed obstruction at the level of sigmoid.

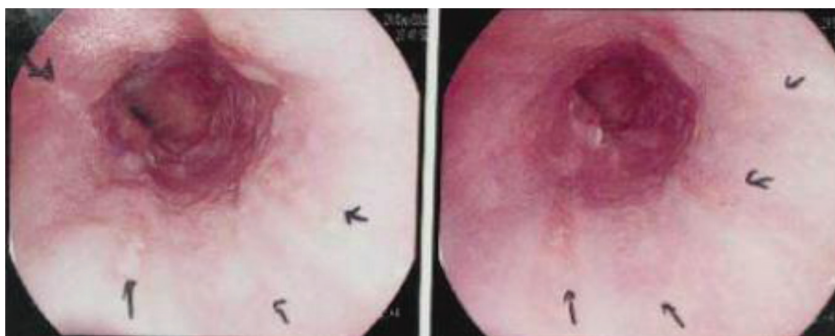
These findings confirmed that the diagnosis is an advanced gastric cancer with peritoneal dissemination, as cT4aNxM1. The tumor markers were within levels.

The patient underwent bypass gastrojejunostomy and ileostomy diversion for palliation, with disseminated peritoneal carcinomatosis.

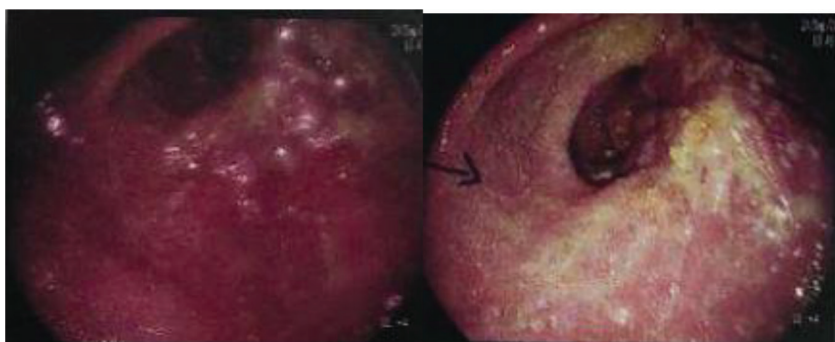
Then proceed with chemotherapy regimens of 5FU, leucovorin, oxaliplatin, and docetaxel. After 6 courses of chemotherapy, upper gastrointestinal endoscopy showed healing of esophageal ulcer, pyloric ulcer, and pyloric mass disappearance. Biopsy showed inactive chronic gastritis. CT scan revealed an improvement in pyloric wall thickening and disappearance of disseminated lesions in the rectovesical pouch.

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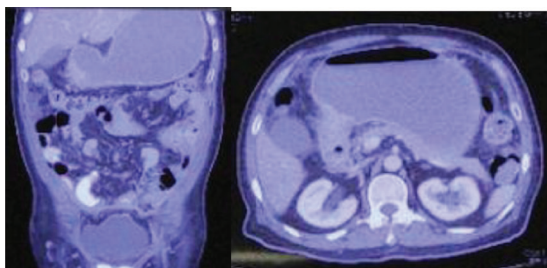
**Figure 1** Multiple ulcers in distal esophagus



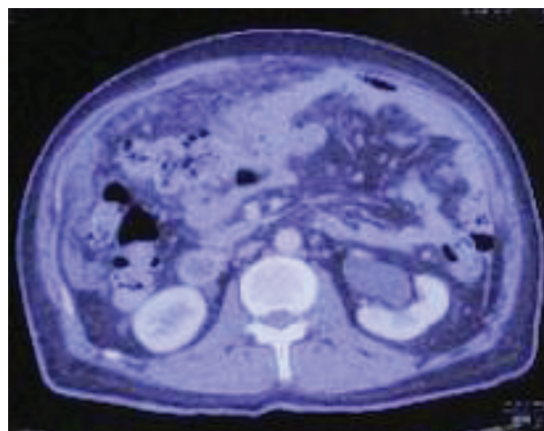
**Figure 2** Gastric mucosal in corpus and antral region showed hyperemia and erosions



**Figure 3** Suspicious mass in prepyloric region confirmed malignant by histology



**Figure 4** A CECT showed an enhanced mass in prepyloric region with fat stranding, suggesting tumor infiltration to surrounding serosa, with evidence of dilated stomach



**Figure 5** Omental thickening due to peritoneal carcinomatosis and left hydronephr due to obstruction caused by Blumer's shelf nodes are seen in this axial CECT

## DISCUSSION

Chemotherapy is a standard treatment for stage IV gastric cancer, but the effects remain unsatisfactory. In the present report, we have experienced a case achieved a complete clinical response by chemotherapy with FLOT regimens. Double combinations of platinum and fluoropyrimidines are generally used, but a meta-analysis has demonstrated significant benefit from the addition of an anthracycline to a platinum and fluoropyrimidine doublet.<sup>8</sup> Triplets containing taxanes are also an evidence-based treatment choice for first-line chemotherapy.<sup>8-10</sup> The FLOT regimen resulted in a median PFS of 5.1 months and a median OS of 11 months in a small non-randomized study.<sup>11</sup> An almost identical regimen resulted in encouraging median PFS and OS of 7.7 and 14.6 months, respectively.<sup>12</sup> Nowadays, several molecular targets showing survival benefits to patient with stage IV gastric cancer.

An accurate diagnosis is highly essential regarding treatment strategy. It is challenging to diagnose peritoneal dissemination before treatment. The sensitivity of CT for peritoneal dissemination of gastric cancer was 43-77%, with a specificity of 82-92%.<sup>13,14</sup> The accuracy of positron emission tomography (PET) for peritoneal dissemination was demonstrated 89%, with a sensitivity 35-63%, and specificity 89-99%.<sup>13,14</sup> Combination of PET and CT indicated high accuracy for detecting peritoneal dissemination. On the other hand, perioperative staging laparoscopy has often been used to identify occult peritoneal metastasis in gastrointestinal cancers.<sup>15</sup> Data from randomized trials in Asian patients have demonstrated a significant survival benefit for cytoreductive surgery plus hyperthermic intraperitoneal chemotherapy (HIPEC) for patients with advanced peritoneal metastases.<sup>16</sup>

## CONCLUSION

Currently, this approach cannot be recommended outside the context of clinical research. Whether after attaining a complete response to chemotherapy should be followed by gastrectomy or best supportive care alone is personalized in each patient.

## CONFLICT OF INTEREST

The author declares there is no conflict of interest regarding publication of the current report.

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