THE EFFECT OF NEOADJUVANT CHEMOTHERAPY IN GASTRIC CANCER: REPORT OF A CASE

Gastric cancer remains a major cause of cancer death despite a significant decrease in its incidence since the 1950s (1). Surgery remains the only potentially curative therapeutic option, but five year survival for all patients is very poor, being approximately 10-15% (1, 2). Surgery alone has not been effective for treatment of locoregional gastric cancer because of the low rate of curative resection and high incidence of distant metastases (3). Chemotherapy has been shown to influence responses in patients with gastric cancer. In the last decade, neoadjuvant chemotherapy has been used to decrease the tumour burden before resection and to improve the prognosis of late stage, but resectable gastric cancer (1). The patients with local advanced gastric cancer can be treated with neoadjuvant chemotherapy and subsequently undergo curative resections.

A 58-year-old man was referred to our hospital for the investigation of epigastric pain, anorexia, and weakness. For about a year, histamine receptor blockers had no effect on relieving the pain. He had a history of weight loss of approximately 15 kilograms. Family history revealed nothing in particular. His physical examination disclosed no pathological findings. The results of routine laboratory tests were normal. His upper gastrointestinal tract endoscopy showed a 6x6 cm ulcerative and infiltrative tumour mass that covered the junction of the corpus and antrum, extending to incisura angularis. Endoscopic biopsy indicated poor differentiated adenocarcinoma. His abdominal ultrasonography revealed a 22x 19 mm regular solid mass that located behind the right hepatic lobe. His abdominal computed tomography demonstrated a 2x1 cm hypodense mass suggesting hemangioma. His upper abdominal endoultrasonography revealed a 3x4 cm solid mass starting from the 55th cm, located at the posterior wall, and invading the surrounding tissues with ulceration and calcification. Also, there were a number of perilesioner lymph nodes, the largest of which was 1 cm. With these findings, the patient was considered as stage 3 (locally invasive) gastric carcinoma (AJCC). He was referred to Oncology department for neoadjuvant chemotherapy. Cisplatin 20 mg/m2, 5-fluorouracil 750 mg/m2 and epirubicin 30 mg/m2 (ECF) were administered for a three month period. After the neoadjuvant chemotherapy was completed, a control upper gastrointestinal tract endoscopy was performed, which showed an 8 mm ulcerative lesion at the anterior wall of antrum. Endoscopic biopsy showed active chronic gastritis with intestinal metaplasia. In control abdominal ultrasonography, the mass lesions in the liver had the same dimensions as his former ultrasonography. In his control upper abdominal endoultrasonography no pathological finding was observed. With these findings, the patient was admitted and an operation was performed. During surgery, a 10 mm telescope was insrted and the abdominal cavity explored. Several biopsies from the liver were obtained and the cavity irrigated with 0.9% saline. The frozen section of the biopsies and cytological examination from the irrigation solutions were all negative. Afterwards, a laparotomy was performed. On exploration, a two 2x1 cm celiac lymph node and a 2x2 cm irregularity in the serosa of the lesser curvature were observed. The result of the frozen section of the lymph node was negative. Consequently, a gastrotomy was performed and full-thickness wall biopsy was obtained from the stomach, which revealed negative findings. These findings led us to consider

the patient as stage I gastric carcinoma, and a distal subtotal gastrectomy and Roux-en-Y gastrojejunostomy were performed. Postoperative pathological examination revealed signet cell carcinoma, tumour positive in 1/2 superficial mucosa. The patient received two more cures of ECF chemotherapy postoperatively. The patient is in his second postoperative year and free of complaints.

Neoadjuvant chemotherapy plays an increasingly prominent role in the treatment of gastric cancer in recent years. Originally defined as systemic therapy given before surgery, neoadjuvant chemotherapy may reduce the tumour burden at the primary site and may control the disease process. Neoadjuvant chemotherapy, by reducing the number of cancerous cells before surgery, may reduce the chance of resistant clones developing. Potential advantages include improved local and distant control, direct evaluation and organ-sparing treatment. Potential disadvantages involve increased toxicity, cost, potential delay in effective treatment, obscuration of pathologic staging, scarring and fibrosis resulting from neoadjuvant chemotherapy, which makes surgery difficult. (3). Neoadjuvant chemotherapy is preferred for the cases of mucinous or poorly differentiated adenocarcinoma, in which primary tumour is thought to be unresectable or only palliative surgery can be done. Neoadjuvant chemotherapy is preferred for oesophagogastric junction or cardia tumours (4, 5).

More recent trials tested neoadjuvant chemotherapy in both initially resectable and unresectable gastric cancer with response rates between 50% and 94%, the combination of epirubicin, cisplatin and 5-fluorouracil (ECF) being the most popular combination (5-9). For the treatment of patients with gastric cancer, a combination with neoadjuvant chemotherapy, cytoreduction of the tumour, and postoperative chemotherapy are recommended. Neoadjuvant chemotherapy is feasible and may be proposed for patients with proven unresectable gastric cancer prior to laparotomy. For patients with locally advanced cancer that is not unresectable, randomised studies comparing neoadjuvant chemotherapy versus surgery alone are recommended. In a conclusion, neoadjuvant chemotherapy is a successful treatment modality for locally advanced gastric cancer.

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