

## Advanced Gastric Cancer in a Young Patient

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### ABSTRACT

*Gastric cancer remains the second most common cancer in the world, and is usually found in men, especially those over 50 years of age. The diagnosis is made by endoscopic biopsy. The high frequency of late diagnosis or advanced stages accounts for the overall poor prognosis for this tumor. Surgery is the most frequently employed modality for both cure and palliation. However, most patients present with advanced disease that is incurable.*

*We reported a rare case of young female patient aged 23 years old with advanced gastric carcinoma. The main clinical features were epigastric discomfort, vomiting, and weight loss. An abdominal mass was palpable on physical examination. Endoscopy showed a giant tumor mass causing gastric outlet obstruction, nodular lesion, ulcerative and hemorrhagic. The histopathologic examination revealed mucinous gastric carcinoma. Palliative resection could not be performed because the tumor tightly adhered to adjacent structures. Jejunostomy was performed to allow enteral nutrition. Best supportive care is very important to improve the quality of life.*

**Keywords:** *Gastric cancer, young patient*

### INTRODUCTION

Gastric cancer is a worldwide disease with variable incidence in different geographic areas. It remains the second most common cancer in the world and it is becoming a serious problem in developing countries.<sup>1</sup>

Gastric cancer is distinguished into two forms, early gastric cancer and advanced gastric cancer. Early gastric cancer refers to invasion of the tumor limited to the mucosal and submucosal layers, whether or not regional lymph node metastases are present.<sup>2</sup> The pathogenesis of gastric cancer is multi factorial, with both environmental and host factors playing a major role in its development. Among the risk factors for gastric cancer are consumption of smoked and salted food; nitrites, cigarette smoking; a lack of fiber in their diet, low socio-

economic status; positive family history; A blood type; hereditary cancer syndrome (familial adenoma polyposis); *Helicobacter pylori* infection; and history of partial gastrectomy.<sup>2,3</sup>

The classic clinical symptoms and findings of gastric cancer are vague and non-specific, including epigastric pain, vomiting, nausea, bloating, early satiety, weight loss, abdominal mass, gastrointestinal bleeding, and sometimes dysphagia. Early gastric cancer may have no clinical symptoms. That is reason why most patients are diagnosed with gastric cancer at advanced stages of the disease.<sup>4</sup> Gastroscopy is very crucial in making the diagnosis of gastric cancer.

Treatment of gastric cancer is mainly surgery. Other treatment modalities are chemotherapy and radiotherapy.

There are two kinds of surgery: curative and non curative or palliation. Early gastric cancer can be cured by non surgical intervention like endoscopic mucosal resection (EMR). In contrast, surgery for advanced gastric cancer is merely palliation. It has been reported that patients underwent palliative surgery had better prognoses than those who did not.<sup>5,6</sup> Inoperable patients and those with metastatic disease have been subject to combination of chemotherapy and radiotherapy. The effectiveness of this therapeutic strategies is still controversial.<sup>7,8</sup>

### CASE REPORT

The patient, Ms A, 23 years, was admitted to the hospital with a chief complaint of nausea and vomiting since 4 months prior to admission. At first, she usually vomited 3-4 hours after meals. She also suffered recurrent epigastric discomfort. She lost her appetite and lost a lot of weight in a short period of time. Eventually, she vomited more often. She could hardly eat any food because she vomited directly after swallowing it. She reported no symptoms of gastrointestinal bleeding such as hematemesis or melena. The patient never had symptoms like this before. Her elder sister died a few years earlier and had similar symptoms as the patient. Unfortunately, the diagnosis had never been confirmed. The patient and her family were of low socioeconomic status.

The patient was generally weak and cachectic. Physical examination revealed vital signs within normal range. The conjunctivae were pale, the sclera were not jaundiced. Heart and lung examinations were within normal range. The liver and spleen were not palpable. An abdominal mass was palpable, with a dimension of 8

x 6 x 4 cm. It was hard, immobile, and was non-tender. Superficial lymph nodes were not palpable.

Laboratory examination results were as follows: ESR 50 mm/hour; hemoglobin 11 g/dl; hematocyte 32 %; leukocyte count 8000/mm; platelet count 485.000/mm; ureum level 21mg/dL; creatinine level 0.7 mg/dL; blood glucose level 87 mg/dL; SGOT 34 iu/mL; SGPT 32 iu/mL; total bilirubin 0.6 mg/dL; alkaline phosphatase 57 iu/mL; albumin 2.6 mg/dL; globulin 4 mg/dL; cholinesterase 2.23; and CA19-9 level < 3 U/mL ( normal < 37 U/mL).

Endoscopy of the upper gastrointestinal tract demonstrated esophagitis, with giant tumor mass causing gastric outlet obstruction, that appear edematous and fragile gastric mucosa. There were nodular ulcerative and hemorrhagic lesions. Some parts of the gaster were covered with fluid and indigested food. The tumor mass was suggested to be malignancy in the antrum. Nevertheless, the scope could still pass through. Flocare was inserted by endoscopy. Abdominal CT scan showed gastric carcinoma in the minor curvature and gastric pylorus areas, with no signs of hepatic metastasis or involvement of adjacent organs. Histopathological examination demonstrated gastric mucosa surrounded with tumor cells and mucinous lamina propria. Scattered signet ring cells were present, but they did not dominate the histological picture. The lesion was concluded to be gastric mucinous carcinoma with a differential diagnosis of signet ring cell carcinoma. There were no signs of *Helicobacter pylori* infection.

The patient was given supportive care for nutrition, fluid and electrolyte balance. In the subsequent weeks, obstruction caused by the tumor aggravated and we thus



Figure 1. Cancer of stomach

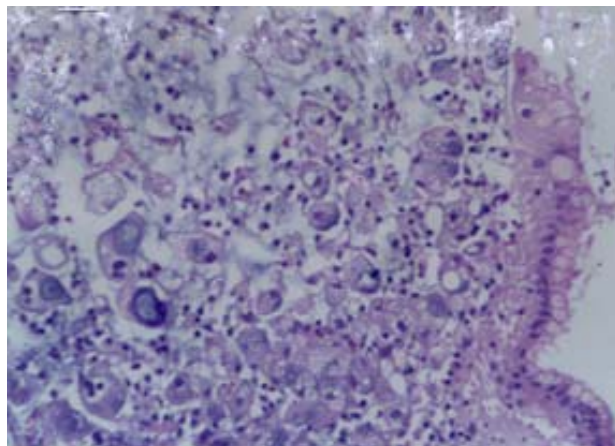


Figure 2. Histopathological appearance gastric mucinous carcinoma

performed a repeat endoscopy. It showed progression of the tumor to the surrounding distal gaster. The pylorus could not be identified. The naso-duodenal tube could no longer be inserted. We immediately consulted to the Department of Surgery and the patient was prepared for surgical intervention. The tumor could not be resectable and they decided to make jejunostomy to allow enteral nutrition.

## DISCUSSION

Gastric cancer is rare among young female. It is usually found in older patients of over 55 years and is more common in men.<sup>1</sup> Data from the Department of Pathology Anatomy of the Faculty of Medicine of the University of Indonesia revealed 16 cases of gastric carcinoma in Cipto Mangunkusumo hospital, Jakarta, from January 2001 to December 2002. A study had reported a worse outcome of esophagogastric carcinoma in young patients compared to those who were older.<sup>9</sup>

The pathogenesis of gastric cancer is multi factorial, both genetic susceptibility and environmental factor play a major role in its development. A positive family history had not been confirmed in this case. However, if it were true, it may also reflect exposure to similar environmental factors beside genetic mechanism. In this case, low socioeconomic status was a risk factor known to be associated with gastric cancer.<sup>2,4,10</sup> Most cases of gastric cancer are first diagnosed at advanced stages. Early gastric cancer usually has no or only minimal clinical manifestation. Thus, early detection of the disease is very difficult.<sup>1,2,6</sup> Common symptoms are weight loss, epigastric pain, vomiting, nausea, anorexia, dysphagia, bloating, and regurgitation. It was often initially misdiagnosed as dyspepsia syndrome. The symptoms and signs of this patient such as nausea, vomiting and abdominal mass reflected the obstruction caused by advanced gastric cancer.

Histopathological features of gastric tumor may also have prognostic value. In this patient, the gastric tumor found was mucinous carcinoma. The gland-like structures were lined by mucous-producing cells and their secretions were retained in the lumen. It was concluded to have been mucinous carcinoma, with a differential diagnosis of signet ring cell carcinoma because scattered signet ring cells were present but they did not dominate the histological picture. The prognosis of mucinous carcinoma is known to be poor.<sup>10,11</sup>

The treatment of gastric cancer depends on the stage of the disease. Surgery is still a major treatment modality for gastric cancer and could be curative or

palliative. Most patients are first diagnosed at advanced, 'inoperable' stages. In this case, the tumor had progressively enlarged and caused obstruction of the gastric outlet. Resection of the tumor is still recommended for palliative treatment. Studies had reported that patients underwent palliative surgery had a better prognosis than those who did not.<sup>5,6</sup> But the tumor was not removed because it was found to closely adhere to surrounding tissue and structures. Removal of the tumor would be very difficult and carried major risks of complications such as bleeding and perforation. Surgical intervention performed to this patient was jejunostomy, to allow enteral nutrition. A nasogastric tube was also inserted to drain the physiological secretions of the upper gastrointestinal tract.

The prognosis of this patient was poor. No curative treatment could be undertaken. The best supportive care was the only treatment strategy, and was essential to improve quality of life. The 5-year survival of patients undergoing non-curative resection was reported to have been only 5 %.<sup>5,6</sup>

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