CASE REPORT

A non-progressive signet patient with ring cell gastric adenocarcinoma who survived for 6 years without treatment

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SUMMARY

An elderly Thai woman had presented with dyspepsia and reflux symptoms since 6 years. Oesophagogastroduodenoscopy showed a large gastric ulcer with a histopathological diagnosis of signet ring cell carcinoma. The test for *Helicobacter pylori* was positive and it was successfully eradicated. An abdominal CT scan showed the irregularly thick antral wall along with non-specific subcentimeter lymph nodes which was compatible with at least stage IA. Her serum carcinoembryonic antigen level was within normal range. She refused any surgical treatment and preferred to take her own medications. To date, 6 years after her first diagnosis, the second oesophagogastroduodenoscopy was performed and showed a large gastric ulcer at the incisura extending to the gastric antrum. The histopathological result of the ulcer confirmed the presence of poorly differentiated adenocarcinoma with signet ring cell. She remains healthy and refused to have a follow-up disease staging or additional treatment.

BACKGROUND

Signet ring cell carcinoma (SRC) type of gastric cancer has a different behaviour from other cell types with an unfavourable prognosis. The history of SRC-type gastric cancer in untreated patients, who survived longer than 5 years, is scarce. We report an unexpected prolonged course of the untreated disease in an elderly female patient.

CASE PRESENTATION

An 84-year-old Thai woman with no underlying disease had presented to our hospital with burning sensation at the epigastrium and retrosternal area without weight loss since 6 years, when she was at the age of 78. She never smoked and had no family history of gastric cancer. Oesophagogastroduodenoscopy findings were small sliding-type hiatal hernia with reflux oesophagitis with Los Angeles classification grade A and a hemi-circumferential ulcer at gastric antrum (figure 1). Biopsy at the edge of the ulcer showed a poorly differentiated adenocarcinoma with signet ring cell histology (figure 2). The *Helicobacter pylori* rapid urease test was positive. She was successfully treated by the standard triple therapy. The abdominal CT showed irregularly thickened wall of the antrum indicative of an infiltrative tumour. There were non-specific subcentimeter perigastric, para-aortic and retrocaval lymph nodes compatible with

Figure 1 Oesophagogastroduodenoscopy shows a hemi-circumferential ulcer at gastric antrum.

stage at least IA.¹ Her haemoglobin was 14.1 g/dL with normal platelets count, white cell count and liver function test. Her carcinoembryonic antigen level was 1.5 ng/mL. She was scheduled for subtotal gastrectomy but she refused. She took on-demand omeprazole for relieving her dyspeptic symptom. She never experienced any episode of gastrointestinal bleeding. Other medications were vitamin C, vitamin B1–6–12, β -glucan, flaxseed oil and Curcuma longa extract. To date, 6 years after the first diagnosis, she remains healthy and has good appetite; however, she had lost 12 kg.

INVESTIGATIONS

The second oesophagogastroduodenoscopy 6 years later showed a large gastric ulcer at incisura extending to the greater curvature of the gastric antrum causing deformity of the antrum with granulation

Figure 2 Microscopic examination shows poorly differentiated adenocarcinoma with signet ring cells (black arrows).

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tissue covering the ulcer area. Rapid urease test was negative. Biopsy of the ulcer was carried out. The histopathological result was consistent with poorly differentiated adenocarcinoma with signet ring cell that was positive for AE1/AE3 and mucin stain and negative for CD3 and CD20 stain.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis for a 6-year non-progressive gastric ulcer is *H pylori*-associated ulcer and MALT lymphoma.

TREATMENT

The patient refuses further investigations including a follow-up staging and additional surgical treatment.

DISCUSSION

SRC of the stomach was reported to have more aggressive behaviour than other types of early gastric cancer such as deeper invasion depth, larger tumour size, positive lymphovascular invasion and positive lymph node metastasis. The SRC histology tends to have diffuse type of Lauren's classification of gastric cancer.² However, a larger tumour size of early gastric cancer with signet ring cell histology may lead to earlier diagnosis than gastric cancer of other histological types.³

The overall 5-year survivals with appropriate treatment including surgery and chemotherapy according to the cancer stage were 96%, 84%, 49.2% and 3.8% in patients with SRC stages I, II, III and IV, respectively.⁴ SRC has long been thought to confer a worse prognosis. Without appropriate treatment, the gastric carcinoma, especially poorly differentiated carcinoma with signet ring cell, rapidly advances. There was only one prior case report of a 74-year-old Korean woman with early gastric cancer with signet ring cell histology who deferred a distal subtotal gastrectomy for 53 months after diagnosis. The surgical pathology showed SRC with submucosal invasion with no lymph node metastasis, which was compatible with stage IA.³

Our case with poorly differentiated gastric carcinoma with signet ring cell stage at least IA had an unexpected non-aggressive course of the disease without any treatment. The

prolonged course could also be due to earlier diagnosis as known as 'lead time bias'. Our patient also took alternative medications effects of which were not exactly known.

Learning points

- ▶ Typically, signet ring cell carcinoma (SRC) has an aggressive behaviour and provides poor prognosis without any treatment.
- ▶ Appropriate treatment after SRC diagnosis including surgery and chemotherapy are necessary to extend the course of disease.
- ▶ The history of SRC-type gastric cancer in untreated patients, who survived longer than 5 years, is scarce. Our case is an exceptional history of gastric SRC.

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