

# An Unusual Case of Recurrent Gastric Cancer Long after the First Gastrectomy Due to Adenocarcinoma

Mohsen Abdollahi<sup>1</sup>, Ghodratollah Maddah<sup>2</sup>, Mohammad Taghi Rajabi Mashhadi<sup>2</sup>,  
Jamal Jalili Shahri<sup>2</sup>, Mehdi Abbasi Sahebi<sup>2</sup>, and Abbas Abdollahi<sup>1\*</sup>

<sup>1</sup> Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>2</sup> Endoscopic and Minimally Invasive Surgery Research Center, Ghaem Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Received: 9 Feb. 2013; Accepted: 7 Jun. 2013

**Abstract-** The postgastrectomy recurrence rate is as high as 30-65%, with 5-year overall survival rates of <20%. Local recurrence is very common which occurs in 38-45% of cases. The most common sites of locoregional recurrence are the gastric remnant at the anastomosis, the gastric bed, and the regional nodes. The recurrence may occur as early and late events after gastrectomy. Most recurrences are early, within three years of surgery. Numerous studies reported the late recurrences, but most of them having a survival time of less than ten years. This report elucidates a case of recurrent gastric cancer after 24 years postoperatively.

© 2014 Tehran University of Medical Sciences. All rights reserved.

*Acta Medica Iranica*, 2014;52(5):411-413.

**Keywords:** Recurrent gastric cancer; Gastrectomy; Adenocarcinoma; Surgical Procedures; Operative

## Introduction

Recurrence of gastric cancer after gastrectomy tends to occur as early and late events. The factors that determine the timing of recurrence include stage of lymph node involvement, stage of the disease at admission, primary site of the tumor and vascular invasion (1). Few studies have been done in identifying factors predicting early and late recurrence after gastrectomy and also time of recurrence. Early recurrence leads to death within the first two years after curative resection of gastric cancer, and the late recurrence is associated with more than two years of survival (2).

Appropriate follow up including regular imaging studies, ultrasonography and CT-scan is required to screen the patients who are at high risk of recurrence. The high risk manifestations of recurrence are metastasis to lymph nodes, stage III disease and presence of vascular invasion (3).

## Case Report

A 58 year old male smoker patient with a history of antacid medication use and no significant family history was referred to physician with a complaint of heartburn

and dyspepsia in 1978. On physical examinations, no abdominal mass and no supraclavicular or axillary lymphadenopathy were found. The patient was provided with antacid medication. Four years later, he complained of hematemesis and was hospitalized in gastroenterology department of our university hospital for 14 days. The next year, he reported intermittent hematemesis much more severe than the first time. Afterwards, the patient was hospitalized with diagnosis of peptic ulcer disease for 15 days. At this time, performing surgery was not possible because of anemic status of the patient. One year later, he underwent endoscopy and biopsy of peptic ulcer. Endoscopic findings revealed an erythematous, fragile and hemorrhagic mucosa and an ulcer with a necrotic surface, on the lesser curvature near the cardia. Histopathologic evaluation of endoscopic biopsy specimens confirmed gastric adenocarcinoma. However, barium study of esophagus and stomach showed normal body, shape, discharge and borders of stomach. Mucosa of duodenum was thick with normal bulb. While, barium study of esophagus and stomach revealed no evidence of malignancy or ulceration of the esophagus or stomach. It also demonstrated mucosal thickening of the duodenum while a normal bulb was evident.

Accordingly, the patient was planned for surgery.

**Corresponding Author:** A. Abdollahi

Department of Surgery, Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran  
Tel: +98 9153141917, Fax: +98 511 8525255, E-mail address: abdollahia@mums.ac.ir

Proximal subtotal gastrectomy, gastroduodenal anastomosis and pyloroplasty operation were performed. The Liver, spleen, kidneys, pancreas and retroperitoneal elements were found normal in initial surgery. Adjuvant chemotherapy was recommended but refused by the patient.

In 2009, the patient with generalized itching and lower limbs weakness underwent endoscopy and gastric biopsy, which demonstrated adenocarcinoma of the body of the stomach. Thereby, the patient was the candidate for another surgery. Total gastrectomy, subtotal pancreatectomy, splenectomy and esophago-jejunosotomy were performed. A pathologic study revealed intestinal gastric adenocarcinoma with invasion to the serosa and pancreas with non-tumoral margins. The patient refused chemotherapy the same as the first time.

## **Discussion**

This report describes a case of recurrent gastric cancer after 24 years postoperatively.

The stage of tumor invasion to gastric wall and stage of lymph nodes involvement are the most important prognostic parameters in gastric cancer. The size of the tumor and lymph nodes involvement are closely related to the chance of tumor recurrence. The patients with late recurrence have had a small tumor size with no lymph node involvement. Shiraishi et al. study demonstrated that in about 67% of patients with the late recurrence, the tumor size was 8 cm and lymph node metastasis was absent or, if present, limited to the perigastric lymph nodes. So, tumor size and level of lymph node metastasis are of importance for estimating the timing of recurrent death. (2) Moreover, lymph vessel invasion is the other risk factor for early recurrence, which indicates a high probability of lymph nodes metastasis and a lower survival rate in comparison with late recurrence. (1) In addition, extensive metastasis to lymph nodes (N2, N3) and limited lymph node dissection (D1, D2) demonstrate higher probability of recurrence (2).

Accordingly, timing of recurrence is associated with the stage of the disease and number of involved lymph nodes. The patients who are diagnosed at a higher stage of the disease (III-IV) or those with extensive involvement of lymph nodes (N2-N3) are estimated die within two years after gastrectomy due to recurrence of gastric cancer (2). Some studies demonstrated higher stage of the disease (III and IV), tumor size, lymph node metastasis, vascular invasion, old age and male sex as predictive factors for survival of patients after gastrectomy. (3, 4)

However, in the study by Sakar et al, predictive factors were reported as follows: lymph node status (N1-N3 versus N0), type of surgery (total radical gastrectomy versus subtotal radical gastrectomy), and Eastern Cooperative Oncology Group performance status (PS 3-4 versus PS 1-2), and tumor localization (cardia versus corpus and antrum). (5) Though, in contrast some studies indicated that stage of the disease, age, sex, histological type of tumor and stage of the disease at the time of lymph node dissection do not have any statistically significant effect on patients' survival (5).

Clinical and pathological manifestations of patients with early gastric cancer can be used for detection of individuals who are at high risks of recurrence or whose clinical condition tends to progress towards the development of secondary gastric cancer (6). In addition, elevated tumor markers, extended lymph node metastasis and tumors in the upper one third of the stomach can be used as predictive factors for early recurrence after curative gastrectomy (7).

It is suggested that reflux of bile juice or duodenal secretion to remnant stomach following gastric resection, induces atrophic gastritis, intestinal metaplasia, and consequently gastric adenocarcinoma (8).

The present case demonstrated lymph node involvement at primary surgery. Regional metastasis was found with extension to T2 and T3. Depending on the type of surgery performed, it can be suggested that longer survival will be expected with proper tumor resection and extensive efforts to remove all tumor tissue and involved lymph nodes surgically.

The major factors predicting the timing of recurrence rate are the degree of local extension of the tumor (T) and number of regional lymph nodes involved (N). Thus, extent of surgical resection, extent of margin involvement and complete removal of lymph nodes are the most important prognostic factors for recurrence of malignancy.

## **Acknowledgment**

The authors would like to gratefully acknowledge Ms. M. Hassanpour for editing the manuscript.

## **References**

1. Lee HJ, Kim YH, Kim WH, et al. Clinicopathological Analysis for Recurrence of Early Gastric Cancer. *Jpn J Clin Oncol* 2003;33(5):209-14.
2. Shiraishi N, Inomata M, Osawa N, et al. Early and late recurrence after gastrectomy for gastric carcinoma.

- Univariate and multivariate analyses. *Cancer* 2000;89(2):255-61.
3. Ogata K, Mochiki E, Yanai M, et al. Factors correlated with early and late recurrence after curative gastrectomy for gastric cancer. *Hepatogastroenterology* 2009;56(96):1760-4.
  4. Yokota T, Saito T, Teshima S, et al. Early and late recurrences after gastrectomy for gastric cancer: a multiple logistic regression analysis. *Ups J Med Sci* 2002;107(1):17-22.
  5. Sakar B, Karagol H, Gumus M, et al. Timing of death from tumor recurrence after curative gastrectomy for gastric cancer. *Am J Clin Oncol* 2004;27(2):205-9.
  6. Ikeda Y, Saku M, Kishihara F, et al. Effective follow-up for recurrence or a second primary cancer in patients with early gastric cancer. *Br J Surg* 2005;92(2):235-9.
  7. Mikami K, Maekawa T, Shinohara T, et al. Predictive factors of early recurrent death after a curative resection of gastric cancer. *Int Surg* 2009;94(2):144-8.
  8. Choi SY, Lee JI, Noh TJ, et al. A case of stump MALT lymphoma after partial gastrectomy. *Korean J Gastroenterol* 2006;47(5):394-6.