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A CASE REPORT
TUBERCULOSIS OF THE STOMACH

By

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胃噴門部の悪性腫瘍を思わしめた胃結核症の1例

原爆傷害調査委員会

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胃および他臓器結核と診断された37才女性の1例報告.

胃結核はまれであるが、この症例は胃X線検査上、噴門部に腫瘍を思わせる増殖性の病変を認め、さらに病理解剖により多数の潰瘍性変化が認

められた.

この増殖性病変は2度の胃X線検査において認められ、腫瘍と診断された。これが噴門部に存在したということは珍しいことである。

Introduction

Tuberculosis of the stomach is generally considered to be rare. Prevalence is less than 0.1 per cent to 0.3 per cent in autopsy and surgical specimens, and 1.4 per cent in individuals with tuberculosis of other sites (1). Cogswell and Cenni's summary of prevalence by age reports cases ranging from one year to more than seventy years of age;

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with male cases occurring twice as frequently as female and most common above the age of forty years (2). Associated duodenal tuberculosis has been reported in 10 per cent of gastric tuberculosis, and site of the gastric lesion usually is prepyloric or antral. The ulcerating lesion is most commonly found on the lesser curvature of the stomach; spread may be direct or by way of the blood and lymphatics (1). Cogswell and Cenni point out that the ulcerating lesion is more common than the hypertrophic type which usually is found in the ileum and large bowel, rather than in the stomach, though the stomach may be invaded by the hypertrophic form (2). Scarcity of lymphatic supply and the depth of the lymph follicles in the stomach have been cited as factors in the usual resistance of the stomach to the process, and the gastric juice is probably not a factor here, but disruption in the mucosa may furnish a basis for establishment of the process (2), though a gastritis may be either primary or secondary (3). Some authors have pointed out that involvement of the stomach and the duodenum, particularly with ulcerative processes, should suggest the presence of tuberculosis, but diagnosis by x-ray is generally conceded to be uncertain, and the hypertrophic form cannot be distinguished roentgenologically from carcinoma of the stomach.

In Japan up to the present time approximately 40 cases of tuberculosis of the stomach have been reported. Only 2 of these were the hypertrophic type. Maruyama et al. (4) reported a case which was diagnosed carcinoma of the stomach roentgenologically, in which mucosal folds in the stomach appeared coarsened. A filling defect was seen on the lesser curvature of the stomach in the prepyloric region; the tumor was palpable and palpation produced a sensation of pain; and moderate pyloric stenosis was noted. The patient's chest roentgenogram was not remarkable. At operation, cicatrization was found in the distal half of the stomach on the lesser curvature aspect, with two ovoid tumors in this region and many swollen lymph nodes. No ulceration was seen. Histologically, the diagnosis was tuberculosis of the stomach.

Furuwada et al. (5) reported a 39-year-old female with a filling defect on the lesser curvature of the stomach seen at fluoroscopy, with rigidity of the gastric wall, but without abnormality of the duodenum. The roentgenological diagnosis was scirrhus carcinoma. At operation rigidity of the lesser curvature of the stomach was noted, with swelling of the adjacent lymph nodes, thickening of the gastric wall, and gray-white nodular tumors and a vast shallow ulcer. Histologically, the diagnosis was tuberculosis of the stomach.

Case Report

A 27-year-old Japanese female with a history of rheumatoid arthritis underwent splenectomy one year previously, presumably for Felty's syndrome. Diagnosis of tuberculous peritonitis was made at splenectomy. When she was first seen at Atomic Bomb Casualty Commission (ABCC), Hiroshima, her condition was tentatively diagnosed as rheumatoid arthritis, but a latex test was negative. Lupus erythematosus was also considered, but the preparations were negative. The patient's chest x-rays showed only pleural adhesions on the left side and were not otherwise remarkable. An upper gastrointestinal series was

also performed at that time, and this showed a polypoid filling defect in the cardia of the stomach. The roentgenological diagnosis was carcinoma of the stomach. The roentgenographic findings are shown in Figure 1.

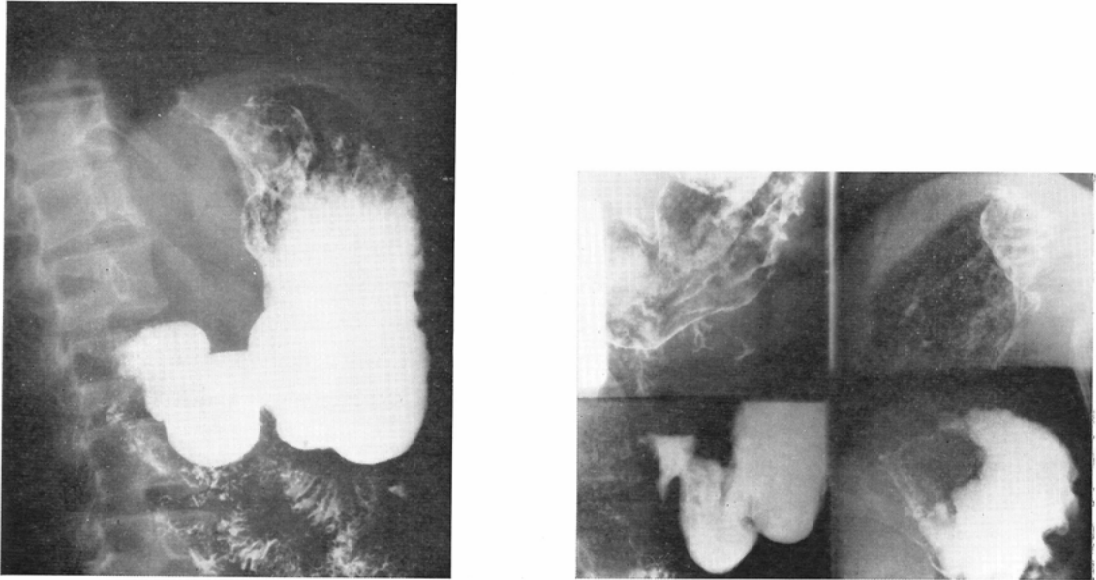


Fig. 1. One spot film and one follow-up film from an upper gastrointestinal series show the hypertrophic lesion in the cardia of the stomach.

Three months later the patient was admitted to a local hospital for treatment. An upper gastrointestinal series was performed at that admission, and a mass was again demonstrated in the cardia of the stomach. The patient was intermittently febrile, and she experienced night sweats. Steroids were administered for approximately one month. Her condition gradually became worse. Symptoms included diarrhea, fever and malaise. She expired four months after admission. Diagnoses at the time of death were: weak heart; septicemia; hepatic cirrhosis.

At autopsy (61-AH-311) multiple old fibrocaseous tubercles were observed throughout the right lung and were older than those seen in other organs. They were surrounded by a wide zone of recent caseous necrosis. In the left lung, there were multiple caseous tubercles that were apparently younger than those in the right lung. Acute tuberculous bronchitis was noted in both lungs and probably represented the site of origin of the pulmonary dissemination and resultant severe tuberculous enterocolitis that involved the duodenum, jejunum, ileum, cecum and ascending colon. Miliary tuberculosis in the liver and a tuberculous salpingitis suggested hematogenous dissemination. It is highly probable that the adrenocorticosteroid treatment given for arthritis contributed to a reactivation of the pulmonary tuberculosis and its widespread dissemination. Lymphatic spread of tuberculosis was also found in the mediastinum and cervical areas; and peritoneal, mesenteric, paraaortic, perigastric and peripancreatic lymph nodes. The lesions in the latter lymph

nodes were probably secondary to the enteritis. The pancreas was extensively involved by tuberculosis apparently extending from numerous tuberculous lymph nodes. Diffuse tuberculous peritonitis was not observed even in the presence of 1,200 c.c. of ascitic fluid. The distal one-third of the esophagus was lined by a red, dull and finely granular mucosa. The stomach was dilated, and the mucosa was pale, thick and soft with rugae of moderate size. Three ulcerative lesions were present in the stomach. An undermined mucosal and submucosal ulceration that measured 1.5 cm. across was present in the proximal posterior part of the antrum, and a 1.0×2.5 cm. mucosal and submucosal ulceration on the posterior wall of the mid portion of the body of the stomach. Approximately 3 cm. from the cardia in the fundus was a 1.0 cm. diameter fistulous perforation of the gastric wall which communicated with the splenic flexure of the colon. This area was incorporated in numerous dense fibrous adhesions, adjacent to which was a polypoid lesion about 2.0 cm. across in the fundus of the stomach. Microscopically, there was acute fibrocaceous tuberculosis of the subserosa and muscular coat in which acid-fast bacilli were demonstrated; in addition, there was submucosal fibrosis. The mucosa was not hypertrophic and the submucosal

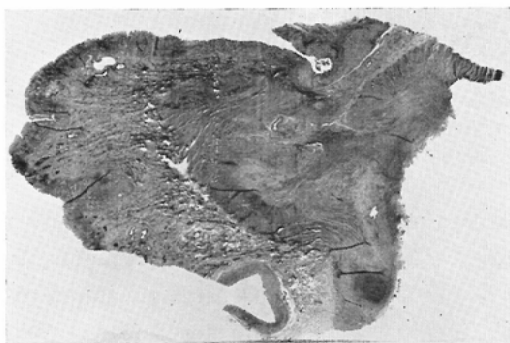


Fig. 2. Polypoid lesion in the fundus of the stomach consistent with fibrocaceous tuberculosis of the subserosa and muscular coat and submucosal fibrosis (low power magnification).

lymph follicles were rather small with no evident tuberculosis. Figure 2 is a reproduction of a section under low power magnification. Sections from an ulcer in the body of the stomach adherent to the pancreas revealed acute fibrocaceous tuberculosis in all layers and acid-fast bacilli were seen. Severe hypersensitive angitis probably associated with the tuberculous process was found in the gastric wall. The tuberculous lesion at the site of the polypoid area of the cardia was predominantly situated in the deep subserosal layer, and seemed to be related to the tuberculous lymphadenitis of the perigastric area outside of the stomach so that the stomach involvement was a secondary manifestation of the widely disseminated tuberculosis in this individual.

Discussion

While some cases of tuberculosis of the stomach have been reported with no evidence

of involvement of the lung, most cases have shown such involvement. The chest x-rays of this patient showed nothing to indicate active or inactive tuberculosis. The multiplicity of sites involved, particularly about the gastrointestinal tract is not unusual; however, in this case steroid therapy probably provoked the dissemination. Evidence of involvement of both stomach and duodenum on an upper gastrointestinal series examination should suggest the presence of tuberculosis. In this individual, even in retrospect, no such inference can be gained by the findings noted from the gastrointestinal series. Some of the gastric lesions may have developed during the seven month interval between the upper gastrointestinal series examination at ABCC and the autopsy. In view of the fact that tuberculous lesions were found in the previously removed spleen, lesions in the gastrointestinal tract, particularly the lesion in the cardia, may have developed by direct extension. The spleen probably was removed for Felty's syndrome, though definite history of the disorder is lacking.

Summary

The case presented is a 37-year-old Japanese female with tuberculosis of the stomach and other organs. Reports of tuberculosis of the stomach are rare in Japan and unusual features of this case included multiple ulcerative lesions not detected by upper gastrointestinal series examination, and hypertrophic lesion in the cardia. The latter lesion which was in an unusual site had been diagnosed as a gastric neoplasm by means of 2 gastrointestinal series.

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