CARCINOMA OF THE STOMACH

Two "Atypical Cases"

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CARCINOMA of the stomach may escape detection even when all modern aids to diagnosis are readily available. The occasional appearance of obscure cases in clinical practice should make physicians alert to the possibility of gastric cancer in patients who may not manifest the usual gastric symptoms.

When the tumor involves the lower esophageal or pyloric orifice it is common for symptoms to develop relatively early. In involvement of the esophagus there may be pain or substernal distress during or shortly after eating, associated with a sense of fullness in the upper abdomen, as well as belching or anorexia. In the pyloric lesion symptoms of gastric retention appear fairly early in the disease process and are manifested by a sense of pressure, anorexia, and vomiting or eructation of food, often bile-stained and containing red or coffee colored blood.

The greatest problem in the diagnosis of gastric cancer presents itself when the tumor involves the cardia without extension to the esophagus or when the greater curvature of the stomach is the site of malignant change. As long as the magenstrasse permits a free flow of food from the esophagus to the duodenum the real cause of the patient's symptoms is sometimes overlooked. Such an error is especially apt to occur when the patient is well nourished, has a good appetite, has insignificant indigestion or none at all, and when a mass cannot be palpated on abdominal examination.

When the patient is under the age of forty and the symptoms are limited to moderate anorexia, fatigue, fever, weight loss in keeping with the degree of appetite loss, and other symptoms suggesting a generalized disease process, causes other than malignant disease are frequently suspected. It is often thought that the difficulty may be due to blood dyscrasias, bacteremia, tuberculosis, disseminated lupus erythematosis, arteriosclerosis, or rheumatic diesase. An error in the primary diagnosis is enhanced by the finding of a moderate leukocytosis without anemia, a high sedimentation rate, fever, or a history that points to disease processes elsewhere than in the stomach.

In the following 2 cases of gastric carcinoma the correct diagnosis was made only after an extensive period of observation and study.

Case Reports

Case 1. A woman, aged 30, and mother of one child, was admitted to the Cleveland Clinic on March 10, 1930. She complained of pronounced fatigue, generalized aching in the back and legs and a troublesome bitemporal headache. Manifestations of a gastric disorder

were meager and consisted of poor appetite and eructations of gas of a foul odor. There was no indigestion, vomiting, diarrhea or pain.

The symptoms began about two weeks before admission and for a period of three days the patient's temperature had reached a maximum of 101 F.; previous to this time she was not aware of fever.

Two and one-half years before the patient had experienced a mild dyspepsia of some months duration. However, roentgenologic studies of the gastrointestinal tract at that time were reported to have been normal. The gnawing hunger pains which accompanied this condition disappeared in a few weeks following the use of extra milk between meals. She remained free of gastric symptoms for over two years.

History of past illnesses did not reveal any significant facts pertaining to her present condition. However, six months before admission she had moved to a farm where she drank unpasteurized milk, but during this period manifested no symptoms of acute brucellosis and gained 18 pounds.

Physical examination did not reveal abnormalities except a pulse rate of 120 and a temperature 103.2 F. The breath had an unusually foul odor suggesting atrophic rhinitis although this condition was absent and no foci of infection were noted in the mouth or throat. No enlargement of lymph glands or evidence of disease in the lungs, heart, rectum, pelvis, or extremities was observed. There were no signs of phlebitis, perirenal tenderness or arthritis. There was no abdominal distention, fluid, masses, or tenderness; the liver, spleen and kidneys were not palpable.

The clinical impression was chronic brucellosis. The blood counts showed 3,480,000 red blood cells; 11,350 white cells; the hemoglobin was 9.5 Gm. The differential count showed polymorphonuclears 88, lymphocytes 7, eosinophils 1, and monocytes 4. Blood culture was sterile. Agglutination tests for undulant fever, typhoid, paratyphoid A and B, proteus O-x19 were all negative. Chest roentgenogram was normal, urine culture was sterile and blood sugar, blood Wassermann and Kahn tests, and sedimentation rate were all within normal limits.

During a period of eighteen days in the hospital the temperature varied between 103 degrees and normal; later after exploratory operation it remained at about 100 degrees. Roentgenologic studies with cholecystographic dye showed a normal functioning gallbladder without stones. A barium meal entered the stomach without delay but a large infiltrative lesion involving the cardia and body of the stomach was found in pyloric emptying. The small bowel studies did not reveal any abnormalities.

Neither tumor at the lower end of the esophagus nor obstruction at the cardia were found by esophagoscopy. Since the lower esophagus was not involved in the tumor process and no evidence for metastasis was found in the liver and lungs operation for total removal of the stomach was considered advisable. Surgical exploration was performed by Dr. T. E. Jones on March 22, 1948. The lesion was extremely large, involving most of the stomach with extension to adjacent lymph nodes and spleen. Since the tumor was inoperable the incision was closed without resection of the stomach.

Comment

Among the unusual features of this case were the youth of the patient (30 years), the short duration of symptoms (two weeks), the absence of symptoms of gastric disease except eructation of foul gas and the general appearance of a chronic infectious process. Although the sedimentation rate was normal on two occasions there was moderate anemia and leukocytosis. However, agglutination tests, bacterial culture studies of the urine and blood, and roentgenograms of the chest were normal.

Gastrointestinal roentgenologic studies were made principally because of the unexplained fever and fetid odor of the breath. In the absence of pathologic

changes in the mouth and upper respiratory tract and of cough it was thought advisable to make a thorough study of the gastrointestinal tract.

Case 2. A man, aged 40, was first admitted to the Cleveland Clinic on the orthopedic service on November 8, 1944. At that time he had a chronic synovitis of the left ankle. Operation was performed by Dr. James A. Dickson after x-ray of the ankle showed no bone changes. A granulomatous mass was removed which on pathologic examination showed tissue containing giant cells consistent with a diagnosis of tuberculous granuloma. Tubercle bacilli were not seen on stained specimens. X-ray of lungs showed no pulmonary tuberculosis. The wound healed by first intention.

This patient entered the Cleveland Clinic on March 5, 1948, with the history of fatigue, weight loss of 18 pounds in the past three months, and loss of appetite. There was no history of fever, chills, night sweats, or cough. He complained of a dull ache in the lower back which would awaken him at night and pain in the left flank on sneezing or coughing.

The gastric symptoms consisted of eructation of gas and rare heart burn, but no colic and no jaundice. The bowels were regular and melena was not noted by patient. There were no genitourinary symptoms.

Past history was not significant except that the patient was in a tuberculosis sanatorium for sixteen months in 1931, but his sputum never showed tubercle bacilli and roentgenograms of the lung did not reveal any abnormalities.

Physical examination of the abdomen showed nothing unusual except a mass in the left upper quadrant which was readily palpable 2 fingers' breadth below the costal margin, was firm with a sharp edge, moved with respiration, and was thought to be an enlarged spleen.

Rectal study showed a tender, firm mass in the rectal pouch, which was interpreted to be tuberculosis of the left seminal vesicle although the possibility of a Blumer's shelf was considered. The extremities and joints were normal save for some fixation of left ankle due to a previous operation.

The urine showed 15 to 20 white blood cells per high power field with an occasional red blood cell. An intravenous urogram demonstrated prompt excretion from both kidneys with a minimal hydronephrosis and a one-hour delay of emptying of the left renal pelvis. There was slight narrowing of the ureter just distal to renal pelvis on the left. Cystoscopic examination revealed mild cystitis; bilateral retrograde pyelograms were normal.

The red blood cell count was 3,930,000, hemoglobin 10.5 Gm., white blood cells 7350 and sedimentation rate was three times the upper limit of normal. Blood sugar was normal; Wassermann and Kahn tests were negative. X-ray of the chest showed a small area of density at the left costophrenic angle thought to be fluid.

On the patient's third admission to the Clinic March 24, 1948, the symptoms were similar to those present previously with the addition of abdominal pain of a generalized burning nature, made worse by eating but relieved temporarily by belching.

The abdomen was distended, tender throughout and considerable ascites present were shown by a fluid wave on percussion. Rectal study showed the mass in the rectal pouch to be larger, fixed, and tender. There was no epididymitis and intradermal tests for tuberculosis and histoplasmosis were negative. At this time a second retrograde pyelogram showed some dilation of the calyces of the left kidney. Abdominal paracentesis revealed a cloudy amber fluid, 150 cells per cc. chiefly lymphocytes and many large bodies suggestive of neoplastic cells. Tumor cells were not found.

Inasmuch as we considered the ascites to be due to tuberculous peritonitis a peritoneoscopy was performed by Dr. George Crile, Jr. There was no sign of peritonitis or of enlargement of the liver or spleen. Pathologic study of a large specimen of ascitic fluid showed typical malignant cells.

Pathologic study of the sediment obtained by centrifugation revealed sheets of cells with hyperchromic irregular nuclei and pale, well defined cytoplasm. Tumor giant cells and mitoses were rather frequently seen. The pathologic diagnosis was "neoplastic cells present, probably carcinoma."

Comment

This patient received a long and somewhat involved diagnostic study. It appeared obvious that he was suffering from generalized tuberculosis. Three and one-half years ago pathologic study revealed tuberculous synovitis of an ankle. His left ureter was narrowed by a stricture, tuberculous seminal vesiculitis was suspected and he had developed ascites. No pulmonary disease, malignant or otherwise, was disclosed by roentgen study. Furthermore peritoneoscopy showed no signs of a tuberculous or inflammatory process and the tuberculin test was negative.

With the discovery of tumor cells in the ascitic fluid and the presence of an obstructing tumor of the distal half of the stomach the correct diagnosis was made.

Conclusion

Cancer of the stomach may cause fever, leukocytosis and an elevated blood sedimentation rate. When such a lesion is masked by symptoms suggesting a generalized disease or infectious process it is important to search for objective facts chiefly by means of laboratory tests. By careful analysis of such findings the true diagnosis of carcinoma can be made in spite of atypical symptoms.