TRAUMATIC RUPTURE OF THE STOMACH,
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The patient, a man, aged 35, was brought to the Central Emergency Hospital at 6:20 p. m., Feb. 19, 1916. He was examined by Dr. Edmund Butler, the surgeon on duty, who made a record of the following findings, and notified me of the necessity for immediate operation.

A short time before, the patient, while driving his automobile, ran into a moving street car, striking the upper abdomen against the steering wheel with great force. Examination showed the patient conscious, with very severe pain in the epigastric region; lacerated wound of the chin; contusion of the scalp; abdomen flat and rigid (boardlike), and extremely tender; liver dullness present; no dullness in flanks; no nausea or vomiting, and no blood in urine.

A diagnosis of rupture of the bowel was made, and operation performed immediately. A midline epigastric incision was made. The preperitoneal fat was hemorrhagic; the posterior sheath of the rectus was ruptured; there was no gas or blood when the peritoneal cavity was opened, but when the stomach was lifted into the wound, gas and blood escaped from the region of the pylorus. One inch from the pylorus the stomach was ruptured through the entire thickness, from the lesser to the greater curvature, on the anterior, and through all but the peritoneal coat of the posterior surface, from the lesser curvature, more than half way across, to the greater curvature. It was rather difficult to make out the exact nature of the injury, because of the fact that the mucous membrane and muscular and peritoneal coats were separated in the region of the wound. There was marked hemorrhage from the torn edges. The rupture of the posterior wall was closed through the anterior opening, with a continuous catgut suture, in one layer; the anterior wall was closed with a continuous catgut suture in two layers. A rubber tube drain was placed to the region of the tear. There was no other bleeding in the abdomen. The patient received 1,000 c.c. of normal salt solution intravenously on the table.

He was returned to bed, and at 12:30 had a pulse of 104, respiration 22, and was resting comfortably. Continuous glucose bicarbonate drip was given by bowel for four days. He required but two hypodermics for pain, following the operation. Small amounts of water by mouth were started, February 22, and February 23 he was allowed small amounts of malted milk. On the 24th, he had an even temperature, and the pulse was 88 and the respiration 18. Recovery was uneventful. He walked from the hospital, Feb. 28, 1916, and was driving his car and attending business two weeks from the date of injury. Two months after the operation he is evidently in perfect health.

The accompanying roentgenogram of his stomach speaks for itself. Dr. Howard E. Ruggles makes the following report of his Roentgen findings: "Stomach high and central, with dilated cardia and body, and a persistent defect in the antrum 2 inches inside the pylorus. Also, persistent contraction of the duodenal cap, which never filled completely, and which emptied rapidly. At two hours after eating there was still one-third residue in the stomach, and at six hours the stomach was entirely empty."

STRICTURE OF THE ESOPHAGUS

REPORT OF A CASE

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History.—Negro, aged 35, laborer, about sixteen months ago swallowed an ounce of concentrated lye by mistake, thinking it was water, with the usual result of the ingestion of such material. He was seen shortly after the accident by a physician in the country near his home, who administered demulcents for the burned condition of his mouth and throat.

The acute symptoms subsided after several days, and he felt no ill effects until some weeks after the accident. He first noticed that if he took any liquids in a hasty manner he would regurgitate some of them, and if he ate solid food of any kind without chewing thoroughly (fletcherizing) he would expel them.

This condition increased for about a year, and at this time he consulted a nose and throat specialist who referred him to a general practitioner for treatment. The doctor dilated the stricture on several occasions, using flexible graduated bougies, and the patient states that he was very much improved by the procedure and could eat with less discomfort. After this he did not consult a physician for a year.

Present Illness.—The patient states that while in the act of drinking lemonade he swallowed a small lemon seed, and it "stuck in his throat," and he was unable either to swallow it or regurgitate it.

He was seen shortly after the accident by two physicians, and both attempted to dislodge the obstruction by bougies, but without success. The man's thirst was intense, as the heat during this period, June, 1915, was extreme, and the man was unable to retain any fluids taken by mouth. About twenty-four hours after the accident he came to this city and consulted a nose and throat specialist, who referred him to me.

Physical Examination.—The patient was fairly well developed and well nourished,

and was very weak and exhausted in appearance, owing to the torrid weather and lack of fluids. At the time of this examination he had had no fluids for over twenty-four hours.

He was given water in small quantities, and a string was tried, but after retaining them for a few moments they would be ejected. Then a small olivary tipped bougie was passed, and it met an obstruction about 14 inches from the teeth. After the patient had been subjected to this torture for some time he was sent to a roentgenographer for an examination.

A roentgenogram was taken after the ingestion of a small quantity of bismuth, and this showed the esophagus to be occluded, and the outlines of a lemon seed could be plainly seen.

The patient was then sent to the hospital and rectal alimentation resorted to for some hours.

Operation.—Under general anesthesia a left rectus incision high up under the costal margin was made, and the stomach located and pulled up into the wound and incised. The finger was then passed into the cardia, but the constriction was so high up that it could not be palpated. A small bougie was then passed into the esophagus from the cardia, and it became obstructed about 12 inches from the latter. After several attempts a small uterine sound was successfully passed beyond the constriction, and with this in place a

Roentgenogram of stomach two hours after eating.

small bougie was passed from the mouth, and on the withdrawal of the sound the bougie was carried into the stomach. This was gently pulled all the way into the stomach cavity, and successive sizes passed until a fairly large dilation was obtained.

During this manipulation the lemon seed was pushed into the stomach; it was of usual size and was intact from its position in the esophagus.

After these manipulations had been carried out, a rubber tube was sutured into the stomach wall after the method of Senn.

Postoperative Course.—For the first twenty-four hours the patient had a rather stormy course, but after this his condition rapidly improved, and at the end of the fourth day he was able to take food by mouth with a fair degree of comfort. At the end of the sixth day graduated bougies were passed twice a day, and at the end of the ninth day the tube in the stomach was removed, and the patient left the hospital on the fifteenth day.

Since his discharge from the hospital he has kept up the passing of the bougies, which has been about twelve months. He eats anything and has had absolutely no trouble with the passage of food through the esophagus.

He has now gained 40 pounds and works every day as a section hand on one of the railroads which come into the city.

REPORT OF A CASE OF ACQUIRED HEMOLYTIC JAUNDICE WITH SPLENECTOMY

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While a great deal has been written and elaborate studies and experiments have been made to determine the nature of hemolytic jaundice, it was not until 1898, that Hayem,¹ through a study and analysis of cases, first showed that the familial and the acquired types were two entirely separate and definite conditions. Since then many experimenters and clinicians have substantiated his conclusions. A review of the summary on hemolytic jaundice made in 1915 by Elliott and Kanavel,² who were the first in this country to report on splenectomy in the familial form, reveals the fact that a splenectomy was done in but thirteen cases of the acquired type, and that all these cases have been recorded in foreign literature. This lack of case reports in the American literature has served as a stimulus for recording the following case:

CASE REPORT

History.—M. T., male, aged 18, tailor, white, born in southern Italy, eighteen months in this country, first came under observation at the Vanderbilt Clinic, Nov. 9, 1915. His parents, three brothers and three sisters, all of whom are living, are in good health. There is no history of icterus in the family. Aside from the fact that when very young he had a fever that lasted three days, he never had any illness. A history of venereal infection could not be elicited. He had never used alcohol, tobacco or drugs. He had been in good general health until eight months previously, March, 1915, when he noticed that his skin and his eyes were becoming rather rapidly lemon colored. In about two days, the jaundice was deep, he felt drowsy, was weak, and had to go to bed. On the third day he had high fever, sweat a good

deal, and had several distinct chills. The high fever with the severe chills and sweats persisted for two weeks during which he remained at home and in bed. The yellow discoloration of the skin and mucous membranes, however, which had by this time become less intense, was nevertheless quite marked. At the beginning of the third week the fever, sweats and chills decreased in severity, and the patient resumed his work at which he remained until his admission to the Roosevelt Hospital, Nov. 17, 1915. During this entire period, he had a daily fever of from 99 to 100, which appeared regularly in the afternoon, which was preceded by a slight chill lasting for about five minutes, and which was followed by sweating. At no time did he have itching of the skin. For a few months prior to his admission to the hospital, in addition to the symptoms mentioned, he complained of a heavy feeling, distention, and tenderness in the epigastrium. These appeared about half an hour after meals and continued from ten to twenty minutes. He had, however, no distinct pain, localized or radiating, and no vomiting or nausea. His bowels moved daily. The stools were yellow, not offensive, of normal consistency, never contained mucus or blood, and were never clay colored. He had no burning on micturition, and no urgency or frequency of micturition. His urine was always of normal color. During the eight months of his illness he had lost 6 pounds in weight.

Physical Examination.—When examined his pulse was 72, respiration 18, and temperature 100. His nutrition was fair. The skin and visible mucous membranes were distinctly icteric, and there was a slight acne rash on the back of the chest. The tongue, teeth, pharynx, tonsils and eyes were normal. The heart and lungs were negative. The abdomen was relaxed and there was slight tenderness in the epigastric region, especially to the left of the midline. The liver was not palpable and on percussion did not seem to be enlarged. The spleen, however, was distinctly enlarged, the sharp inner border being felt near the midline, and reaching almost to the umbilicus, and the lower pole being 4 inches above the crest of the ilium. The consistency was about normal, the surface smooth, and not tender. The genitalia, extremities and reflexes were normal.

Laboratory Examinations.—Nov. 9, 1915, the blood examination showed hemoglobin 68 per cent., erythrocytes 4,500,000, and leukocytes 4,200. The differential count of 200 white cells showed polymorphonuclears 78.5 per cent., small lymphocytes 12.5 per cent., large mononuclears 4 per cent., eosinophils 2 per cent., basophils 0.5 per cent., and transitional cells 1.5 per cent. Slight poikilocytosis was present and the crenation of the red blood cells was marked. No pigmented or other abnormal erythrocytes were found. A careful and repeated search for malarial plasmodia proved negative. Blood withdrawn for the Wassermann reaction also gave negative results, but tests for bilirubin in the blood serum were strongly positive.

Gastric analysis made, November 10, after a test breakfast, showed free hydrochloric acid 40, and a total acidity of 60. There was no blood in the extracted contents, but a very slight trace of bile was present. An examination of the stool made the same day showed the feces to be normal in color and consistency. Microscopic examination revealed a large quantity of cellulose, with a few starch granules. No fat globules or ova were found. The particles were heavily tinged with bile.

Successive daily analyses of the urine gave negative reactions for albumin, sugar and bile. The urobilinogen and urobilin tests were repeatedly strongly positive. Microscopically the urine was continually negative.

November 15, the patient was referred to Dr. Mortimer Warren, pathologist to the Roosevelt Hospital, who reported as follows: Blood count showed erythrocytes 4,200,000, with a hemoglobin of 78 per cent. The white blood cells totaled 4,200, with a differential count of polymorphonuclears 75 per cent., lymphocytes 15 per cent., large mononuclears 1 per cent., transitionals 5.5 per cent., eosinophils 3.5 per cent. The color index was 0.9 per cent. Anisocytosis and poikilocytosis were present. There was no polychromatophilia or granular basophilia. By vital staining 16 per cent. of the red

1. Quoted from Krumbhaar (Footnote 7).

2. Elliott and Kanavel: Splenectomy for Hemolytic Icterus, Surg., Gynec. and Obst., 1915, xxi, 37.