Lastly, and most important, was the fixing of Rivet's movements on the previous evening. It was acknowledged that the men had been together about seven o'clock the previous evening, and were to have met again later at a saloon. There was no evidence that they did. One witness testified that she saw Rivet pass her shop, not far distant from the place where the murder was committed, at about twenty minutes past ten going in that direction. His sister showed that he came to her house between twenty and thirty minutes after eleven and passed the night there, and there was nothing in his manner when he came in to arouse suspicion.

Two other circumstances were brought out to which importance was attached by the prosecution.

First, about two weeks before the deceased alleged he had been made very ill after drinking two glasses of whiskey given him by the defendant. His symptoms were severe pain in the stomach and vomiting, lasting for twenty-four hours. This the government claimed was consistent with sulphuric acid having been given with the whiskey.

Second, that the two men had been found by some boys drinking at the scene of the murder on the Saturday night previous. It was suggested that the murder was contemplated then, but the entrance of the boys prevented its accomplishment. In any case, it showed they were accustomed to go there.

The defense was an alibi, and that the circumstantial evidence was not sufficient to implicate the prisoner.

After a short deliberation the jury returned a verdict of murder in the first degree.

It is impossible in briefly presenting a case to give an adequate picture of the force of the evidence as presented to the jury. One must sit through the trial itself to thoroughly appreciate it. The one important fact was that the defendant was the central figure about which everything was grouped. Not a spark of evidence was introduced to show that there was any one else to be benefited by Gailloux's death. Nor was any one but the defendant associated intimately with him.

As to the circumstances, if taken singly, there is not one that points solely to Rivet. A great many people smoke that peculiar brand of cigarettes. Any one can procure sulphuric acid from a druggist without a prescription, and it does not have to be entered in the poison book. Moreover, there are many other liquids besides sulphuric acid and sulphate of copper that have a brown and green color. All this was ably argued by the defense, but in spite of it, when these facts were all linked together, they formed a chain which unerringly drew the defendant to the electric chair.

The part played by the sulphuric acid in the tragedy is only a matter of conjecture, and probably will never surely be known. One theory is that Rivet intended to get Gailloux drunk, and, when stupid, to give him a dose of sulphuric acid in the hopes that it would eventually kill him. But the victim was not far enough gone to swallow

it, and then Rivet, finding himself discovered, dealt the fatal blow. Another theory is that he poured the acid into Gailloux's mouth and over his face after he was struck down, in the hopes that the case would be regarded as suicide, and the blow on the head explained by a fall against the desk.

Whatever the circumstances were, my own opinion is that the acid was introduced when the man was lying where he was found, as otherwise it would be difficult to explain its intimate mixture with the blood which had flowed from the wound in his head.

THE DIAGNOSIS OF ULCER OF THE DUODENUM.

BY E. A. CODMAN, M.D., BOSTON,
Assistant Visiting Surgeon, Massachusetts General Hospital.

(Concluded from No. 24, p. 857.)

CASE XXXVII. Mr. C. S. H., age thirty-six. Lawyer. Massachusetts General Hospital. May 25, 1907. Vol. 563, p. 297.

"Two years ago seized with attack of acute pain in region of gall bladder, with vomiting and no jaundice. This pain with remissions and exacerbations went on for nearly a year. He was then free of it until last December, when he had another attack lasting several weeks. For past two weeks has been having frequent attacks of severe pain in the right hypochondrium with some vomiting. Yesterday had an attack which was much worse than any he had had before. Pain has continued. Patient required large doses of morphine to keep him quiet; vomited yesterday. Bowels constipated. No urinary symptoms. No jaundice. Temperature, 100.4; pulse, 108. Abdomen tender and spasmodic, especially in right hypochondrium.

Operation.—Cloudy peritoneal fluid and fibrin. Gall bladder normal except for adhesions. "Small perforation, apparently in duodenum close to ampulla of Vater." Region of perforation apparently well walled off by adhesions from abdominal cavity. Wicked.

(In all probability this localization of the perforation was inaccurate.)

CASE XXXVIII. Mr. J. C., age forty-three. Shipping clerk. June 19, 1907. Massachusetts General Hospital. Vol. 580, p. 25.

"For past year has had grumbling pain in appendix region, associated with constipation; gives no history of gastric ulcer or indigestion."

Seven years ago he had a similar sudden abdominal pain. At the time of entrance his symptoms were typical of acute peritonitis from perforation of the duodenum. An incision was made over the appendix first, which was found slightly enlarged but evidently not the cause of the trouble. The incision was enlarged upwards and perforation found in the anterior wall of the duodenum. It was successfully sutured and the patient made a good convalescence.

On July 22, 1908, the patient reported by letter that he was perfectly well except for a slight indigestion, which was easily relieved by eating. On Aug. 13, 1908, he reported that the indigestion had disappeared. On March 21, 1909, he says that he has been perfectly well since, and has had no trouble of any kind, although his occupation calls for considerable physical strength.

CASE XXXIX. A baby, S. C., age three months. Massachusetts General Hospital Oct. 8, 1907. Vol. 680, p. 185.

This child had not been well after the sixth week. Had been fed on condensed milk and died with continual vomiting and blood in stools toward the end.

Autopsy No. 2024.

Anatomical diagnosis. — Ulcers of the duodenum with hemorrhage into the intestine; bronchopneumonia; fatty metamorphosis of the liver; ulcer of the cornea (right); anemia.

On section the duodenum beginning at a point just below the pylorus and in the posterior wall shows an irregularly shaped loss of substance. The ulcer measures $1\frac{1}{2}$ cm. in length by 6 mm. in greatest width. The margins are somewhat irregular and the base shows a small adhering, reddish, somewhat granular mass of fibrin and blood-clot-like material. The ulcer extends into the submucosa. Immediately below this ulcer there is another very minute one similar in character to the other.

The first portion of the small intestine contains much blood-clot-like material, and the lower part of the small intestine and the large intestine contains a moderate amount of semi-fluid chocolate-colored material. The intestine otherwise is not remarkable.

CASE XL. Mr. J. D., age forty. Rubber worker. Oct. 27, 1907. Massachusetts General Hospital. Vol. 575, p. 277.

Has never had a previous similar attack before. Has had a cough six months. Three days ago while at work had a sudden abdominal pain and vomited. On examination at the hospital there was felt by rectum "a very definite mass high up."

Operation. — Five-inch median incision. Mass in pelvis was an abscess containing foul thick pus, while fluid in rest of abdomen was turbid but not especially foul. No cause was found for the peritonitis. A perforation of the duodenum was evidently not suspected.

Autopsy No. 2038.

Anatomical diagnosis. — Ulcers of the duodenum with perforation of one of them; subdiaphragmatic abscess; general peritonitis; serofibrinous pleuritis (right); hemorrhagic edema of the lungs; operation wound (appendectomy); chronic pleuritis (right).

The duodenum on section shows in its anterior wall just below the pyloric ring and a little to the right of the median line a circular loss of substance extending completely through the wall and measuring 1 cm. in diameter. The inner aspect of the ulcer shows rounded, slightly beveled margins and the wall of the duodenum about the margins of the ulcer shows but little if any thickening. The peritoneal surface of the wall of the duodenum in the region of the ulcer shows a few rather slight, foul, shaggy adhesions. The mucosa of the posterior wall of the duodenum just below the pyloric ring shows two very shallow losses of substance with slightly irregular margins and bases. The larger one of these ulcers measures 3 mm. in greatest dimension. Near these ulcers there is a minute, indefinite, shallow area of depression.

The small intestine elsewhere is not remarkable.

CASE XLI. Mr. C. W., age thirty. Feb. 20, 1908. Massachusetts General Hospital. Vol. 602, p. 65.

Health always good. Says seven years ago his friends noticed that he was jaundiced for about two or three days. Never before or since. Has had a few slight digestive disturbances at times. No previous similar attacks. About two weeks ago suddenly seized in early morning with sharp abdominal pain shooting across lower portion of abdomen. Also had pain in right hypochondrium. Patient has been unable to work since and has complained of pain and tenderness in right upper abdomen and to less degree about appendix region. Has vomited eight to ten times since onset. Has noticed nothing in color of stools or urine. Has

felt languid and unable to eat any but the lightest food. Pain in hypochondrium has been more or less constant, relieved for a short time by certain positions. To-day says that pain is in region of right costal margin and would feel fairly well if it were not for considerable tenderness there. Signs of localized peritonitis below right costal border. Came in in wheel chair. Temperature, 101; pulse, 80.

Operation Feb. 22. Adhesions. Pyloric end of stomach somewhat edematous and adhesions separated carefully from under edge of liver. Abscess containing about half an ounce of pus was found. Further dissection revealed thickened gall bladder with no stones. No stones felt.

Considered perforated ulcer but not definitely proved. Drainage. Convalescence uneventful.

CASE XLII. Mr. W. F. H., age thirty-nine. Feb. 27, 1908. Irish teamster. Massachusetts General Hospital. Vol. 602, p. 177.

Patient was brought in moribund and no history could be obtained except that he had complained yesterday of sudden abdominal pain in the hypochondrium. He died without operation.

Autopsy No. 2092.

Anatomical diagnosis. — Hypertrophy and dilatation of the heart (physiological); edema and hypostatic congestion of the lungs; peptic ulcer of the duodenum with perforation, with escape of stomach contents into the cavity of the peritoneum; acute general peritonitis.

Upon section subcutaneous fat 1 cm. in thickness; section of the peritoneum is followed by the escape of gas with fecal odor; muscles red and firm; the parietal peritoneum, mottled with bright red lines and points, slightly opaque; the cavity of the peritoneum contains rather abundant thin, slightly opaque, pale brownish fluid having an odor of stomach contents; the coils of the small intestine lightly interadherent by shreds of fibrin; the vascular peritoneum in places injected, smooth and of slightly diminished luster; the front of the great omentum shows numerous areas of ecchymosis; the anterior surface of the duodenum at a point immediately below the pylorus shows an oval opening .2 by .3 cm., through which may be readily expressed fluid similar to that contained in the peritoneal cavity; anterior border of liver 8 cm. below the tip of the ensiform cartilage; vermiform appendix and mesenteric lymph nodes natural.

Gastro-intestinal tract. — Stomach: Upon section contains a little pale brown fluid material; the mucous membrane negative.

Intestines. — Small intestine: The front wall of the duodenum at the point above noted presents the conditions already described; the surrounding peritoneum fairly smooth; on section, this opening corresponds with a pocket irregularly oval, the edge of which is 1 cm. below the inner margin of the pylorus; the edges fairly regular, the sides funnel-shaped; the opening in the mucous membrane is about 1 by .6 cm., the surrounding border is negative; the upper part of the small intestine is somewhat relaxed, partly filled with fluid material; elsewhere practically empty; the peritoneum in places slightly injected, throughout a little cloudy, and here and there overlaid with lightly adherent fibrin; the large intestine partly filled with scybala; the mucous membrane natural.

CASE XLIII. Mrs. M. B., age fifty-seven. May 5, 1908. Massachusetts General Hospital. Vol. 160, p. 315.

Was brought to the Accident Room on May 5, 1908. No previous similar attack. No history of gastric trouble. Five days ago acute pain and vomiting; went to Emergency Hospital, where she has been since. Has been in constant pain, vomiting continually, and has had

no movement for six days. Abdomen distended and mass in epigastric region.

Operation. — Five-inch incision in right rectus. Two very black shiny coils of small intestine pulled out with difficulty. Constriction found at both ends of black bowel at about middle of small intestine. Forty-two inches of black gut removed. On May 9, four days later, an attempt was made to do an end anastomosis which resulted in a fecal fistula. The patient lost strength and died on May 20.

Autopsy No. 2152.

Anatomical diagnosis. — Fibrino-purulent peritonitis; operation wound (excision of a portion of intestine); chronic interstitial nephritis; ulcers of the duodenum; chronic pleuritis; streptococcus septicemia.

On the anterior wall of the duodenum, about 3 cm. from the pylorus, there is an irregularly shaped loss of substance in the mucosa, 2 cm. in greatest dimension. This loss of substance extends down to the muscular coat. The base is smooth, with some finely shaggy, yellowish material. The edges are ragged, rounded over, but show no induration. On the peritoneal surface opposite this ulcer there is slight puckering with some omental fat adherent. About 3.5 cm. from the pylorus, on the posterior wall, there is a similar loss of substance in the intestine 9 mm. in greatest dimension. A third similar loss of substance is found measuring 3 mm. in greatest dimension, and situated about 3 cm. from the pylorus on the anterior surface. The intestines otherwise are not remarkable.

CASE XLIV. Rev. Mr. A. P., age sixty-five. Clergyman. June 12, 1908. Massachusetts General Hospital. Vol. 597, p. 293.

This patient had been in the hospital a year previously and had had a prostatectomy done. He had a hernia and had worn a truss for five years. He was operated on under the diagnosis of malignant stricture of the sigmoid. He stated that ten days before entrance he was exposed to rain and got wet. Next morning began to have pain across his lower abdomen, especially to the right side. Pain was very severe but was not accompanied by vomiting and was spasmodic in character. While in the hospital he passed some clotted blood by rectum.

At operation, on June 12, thin, cloudy, straw-colored fluid was found in the abdomen. There was pus in the right iliac fossa and the appendix was normal. In the pelvis beyond the bladder was a large mass of matted intestines and more pus. This surrounded a small hard mass probably in the sigmoid. This was supposed to be a malignant stricture of the sigmoid which had perforated. An enterostomy was done in the sigmoid above the lesion. The patient died on the nineteenth day.

Autopsy No. 2171.

Anatomical diagnosis. — Operation wounds; colostomy; general fibrino-purulent peritonitis; purulent bronchitis; peritoneal lipomatosis; stenosis of the sigmoid; duodenal ulcer; arteriosclerosis; fibro-calcareous endocarditis of the aortic valve; fibrous endocarditis of the mitral valve (slight); hypertrophy and dilatation of the heart; obsolete tuberculosis of the lungs and a mesenteric lymphatic gland; small enterocystoma; double inguinal hernia; hydrocele; cholelithiasis; arteriosclerotic degeneration of kidneys; slight fatty metamorphosis of the liver; central degeneration of lobules of liver.

About 2 cm. beyond the pylorus on the posterior wall of the duodenum is an oval loss of substance about 2 by 1 cm. and which is about 3 mm. in depth. The edges are smooth, rounded, overhanging, but not indurated. The base is shaggy and contains a few shreds of black material. There is no evidence of leakage through this

ulcer in the adjacent tissues. The mucosa of the intestines otherwise is not remarkable. There is generally a great abundance of fatty tissue in the retroperitoneal tissue, in the omentum and in the mesentery. The appendices epiploicae are very large. In the region of the sigmoid, beginning just above the brim of the pelvis, and extending down behind the bladder, there is an irregular lobulated series of masses which are connected with the mesentery. These masses are not adherent to the wall of the pelvis or to the other structures. On section, some of these masses seems to be enlarged appendices epiploicae, while others are fatty masses with strands of fibrous tissue running into them. These masses are contiguous with the external coat of the intestines and they have no apparent connection with the mucosa. In the situation of these masses the lumen of the large intestine seems to be distinctly smaller, but there is no occlusion. *In situ* there is no kink or twist of the intestines. The whole large colon is rather small. The small intestine is of normal size. The stomach is distinctly distended. There is one fibro-calcareous lymphatic gland in the mesentery, and here and there in the mesentery there are smaller and larger masses which on section are made up of fatty tissue.

CASE XLV. Mr. F. J. McH., age twenty-four. Oct. 7, 1908. Massachusetts General Hospital. Vol. 611, p. 183.

Always well, no previous attack. A few weeks ago patient was seized with attack of epigastric pain while at work; this was followed by a hollow feeling in his stomach, having no relation to his food. This feeling has continued with occasional periods of relief.

The evening of the day before entrance he had eaten a hearty supper, smoked a cigarette and fell asleep in his chair. He was awakened from his nap with a violent cramp-like pain, etc.; was brought to the hospital with signs of a general peritonitis. At operation, perforation was found in the first portion of the duodenum and closed. He made a good recovery and was discharged on the eighteenth day.

CASE XLVI. Mr. M. C. Nov. 2, 1908. Massachusetts General Hospital. Vol. 626, p. 149.

For the past few years he has had numerous attacks of what he considered indigestion. These attacks consisted of pain, usually in the epigastrium. He had had nausea and sometimes vomiting, but the pain has never been severe enough to prevent him from doing his work. The attacks have come at intervals of three or four months for the past few years. With these exceptions the patient has always enjoyed unusually good health. Has been a hard drinker. Has never been jaundiced.

Two days ago, when returning from work, had a sudden sharp pain in the epigastrium, so severe that he dropped in his tracks and had to be helped home by bystanders. When brought to the hospital, he presented signs of general peritonitis from a high appendix or perforation of an ulcer. The surgeon who saw him thought at the operation that duodenal ulcer was the most probable diagnosis. During the operation the foul-smelling abscess and the location to the outer side of the colon made him favor appendicitis. A portion of the appendix was dug out and removed. Several days afterwards the discharge from the wound rendered duodenal ulcer again the most probable diagnosis.

The patient lived for some weeks and died on Dec. 2.

Autopsy No. 2229.

Anatomical diagnosis. — Ulcer of the duodenum with perforation; subdiaphragmatic abscess with extension into the lower lobe of the right lung; abscess of lower lobe of right lung; empyema (right); obsolete tuberculosis of apex of right lung and of a mesenteric lymphatic

gland; chronic pleuritis; arteriosclerosis; chronic perisplenitis; chronic appendicitis; laparotomy wound.

The operation wound in the anterior abdominal wall leads down into the region of the gall bladder and into a mass of adhesions which bind the upper end of the duodenum and the stomach in the region of the pylorus and the omentum and transverse colon to the under surface of the right lobe of the liver anteriorly and to the round ligament of the liver, and in close relation to the parts mentioned the anterior surface and a portion of the upper surface of the right lobe of the liver are bound to the diaphragm by rather firm adhesions at the margins of a roughly circular area about 15 cm. in diameter. Separation of these adhesions permits the escape of a considerable amount of semi-fluid purulent material from between the liver and diaphragm, and the surface of the liver within the area mentioned is coated with soft yellowish, fibrino-purulent material. The diaphragm over that portion of the area on the superior surface of the right lobe shows a complete interruption in its continuity, with ragged, irregular necrotic margins. The diaphragmatic surface of the lower lobe of the right lung is adherent to the diaphragm about the margins of the ragged opening just described, and through this opening the fingers pass directly into purulent infiltrated, necrotic, disintegrated lung tissue. The opening in the diaphragm measures about 4 cm. in greatest dimension. The under surface of the left lobe of the liver is weakly adherent to the anterior surface of the stomach. The stomach is contracted down and tubular in shape. On section, the stomach presents no lesions.

The walls of the first portion of the duodenum are slightly thickened and the anterior wall presents adhesions which are continuous with the adhesions previously mentioned, and at a point in the anterior wall just below the pylorus and laterally to the right there is a complete interruption in the continuity of the wall of the duodenum, through which opening the lumen of the duodenum communicates with the space enclosed by the adhesions previously described as present in this region. On section the pylorus is contracted and the upper portion of the duodenum is also contracted down. The remaining portions of the duodenum are not remarkable. The pylorus and the upper portion of the duodenum do not admit the passage of the little finger, but do admit the passage of the large probe. The mucosa of the duodenum immediately below the pylorus and laterally to the right and extending on to the anterior wall shows a roughly oval-shaped loss of substance with fairly smooth rounded margins which over one half of the ulcer extend down to a fairly smooth base and which over the other half of the ulcer extend down to the margins of the opening previously described as present in the wall of this portion of the duodenum.

The ulcer measures about 2½ cm. in its long diameter, and the opening in the base, which is slightly irregular in shape, measures about 12 mm. in its greatest dimension. The intestines elsewhere on section are not remarkable.

CASE XLVII. Miss H. P. A., age fifty. Trained nurse. Jan. 8, 1909. Massachusetts General Hospital. Vol. 255, p. 22.

Was referred to the Massachusetts General Hospital from the House of the Good Samaritan for an acute attack of endocarditis.

Autopsy, Jan. 8, 1909, duodenal ulcer found. Autopsy No. 2278.

Anatomical diagnosis.—Acute meningitis (pneumococcus); polypus endocarditis of the mitral valve; fibrous endocarditis of the mitral valve; hypertrophy and dilatation of the heart; slight arteriosclerosis; infarct of the kidney; soft spleen; ulcer of the duodenum.

The duodenum shows in its mucosa at a point a little below the pylorus a small elongated oval loss of substance about 1½ cm. in greatest diameter. The margins of the ulcer are rounded and descend abruptly to a smooth thin base which consists practically of the slightly thickened peritoneal coat. The peritoneal side of the base of the ulcer is perfectly smooth and shining. The base of the ulcer breaks upon handling. The small vessels leading to the margins of the ulcer are apparently free. At one point in the margin of the ulcer there is a minute, slightly softened, dark reddish area. The intestine elsewhere is not remarkable.

CASE XLVIII. Mr. D. K., age forty-five. Choremans. Massachusetts General Hospital. Feb. 6, 1909.

For six months to one year has had occasional epigastric distress. About Sept. 1 began to vomit almost every day, sometimes after eating and sometimes on getting up in the morning. Distress generally began about noon and lasted until night. Slept fairly well. Difficult patient to obtain history from. No excess of alcohol. In the last year has lost 30 lb., most of it lately. Has been under careful physician who has brought about considerable improvement by attention to diet, etc. Blood was found in the vomitus.

A week ago woke up feeling well, but at about 8 o'clock in the morning, while shoveling snow, was taken with sudden epigastric pain. Vomited. Had had no breakfast. He stopped work at once and went to bed. Pain has continued and has been mostly in region of gall bladder. The pain is gripeing in character and feels better when he sits up. There is no tenderness and soreness in region of gall bladder. He was kept under observation in the medical ward for three days and then transferred to the surgical side. When operation was done an abscess in the region of the gall bladder was found and evacuated. He was twice later operated on for subphrenic abscess.

His strength gradually failed and he died on the 9th of April.

Autopsy No. 2348.

Anatomical diagnosis.—Ulcer of the duodenum; chronic peritonitis; acute diffuse fibrino-purulent peritonitis; acute pleuritis (left); chronic pleuritis (right); abscess lower lobe of right lung; abscesses of the liver; slight hypertrophy and dilatation of the heart; scars of operation wounds; thrombosis in inferior vena cava; septicemia (pneumococcus).

The transverse colon in the region of the hepatic flexure and the pyloric end of the stomach, the duodenum and the retroperitoneal tissues about the upper pole of the right kidney and the right adrenal and the under surface of the liver are bound together by dense, firm, gray-white homogeneous inflammatory like tissue. In places this inflammatory tissue is about 5 mm. in thickness. The anterior margin of the right lobe of the liver is bound to the parietal peritoneum by firm adhesions. In the region of the spleen and upper pole of the left kidney there are adhesions also. Breaking up these adhesions liberated in the region of the liver and spleen large pockets of slimy pus. Between the anterior surface of the right lobe of the liver and the diaphragm there is a small space which shows only a small amount of this pus.

At a point on the posterior wall of the duodenum laterally and to the right and about 2 cm. below the pylorus the mucosa shows a roughly triangular shaped loss of substance about 2 cm. in greatest dimension. The ulcer has smooth rounded margins which extend rather abruptly to a smooth fibrous looking base. At one point in the base of the ulcer, situated at its extreme right, there is a slight depression. The wall of the duodenum in this situation is buttressed by the adhesions and inflammatory tissue previously mentioned. The

mucosa in the region of the right end of the ulcer is thrown into two or three small thickened fold-like masses, and there are one or two small grayish smooth streak-like areas extending off from the margin of the ulcer. From the left extremity of the ulcer a grayish, slightly depressed, narrow, streak-like area extends directly across and around the duodenum as far as the cut edge on the left side. In one or two places in the region of the left end of this streak-like area it broadens out slightly over a very short distance into small, smooth, somewhat fibrous-like areas. This streak-like area extends around parallel to the pylorus and at about a distance of $1\frac{1}{2}$ cm. from it. The triangular ulcer and the cicatricial-like streaks extending from it around the duodenum roughly form an annular, shallower and deeper area of cicatricial-like depression. Just below the pylorus the mucosa of the duodenum shows one or two small irregular areas of depression. Sections from this case published in my previous paper show that the "streak-like area" was the scar of an old ulceration.

CASE XLIX. Mr. D. F. McN., age twenty-three. Works in shoe shop. June 2, 1909. Massachusetts General Hospital. Vol. 164, p. 217.

Has always been well except for slight indigestion for past four years, and one attack of abdominal pain a year and a half ago, which lasted a week. Twenty-seven hours before entrance had a severe attack of general abdominal pain which became localized in the right lower quadrant. Abdomen slightly distended, tympanitic throughout, and considerable spasm, especially in right lower quadrant. Diagnosis was supposed to be appendicitis and a right rectus incision was made. The appendix appeared normal and further exploration showed that pus came from the region of the stomach. A median incision was then made above the umbilicus; "on the posterior surface of the upper second portion of duodenum was found a perforation." Perforation was not sutured, but drained through a stab wound in the side.

Convalescence was uneventful.

CASE L. The following case is that of a personal friend who was operated on by another surgeon.

He is about thirty-five years old and has been strong and well except for the stomach symptoms which follow.

Eight or nine years ago, when working very hard, he had pain and burning on an empty stomach, that is, two to four hours after eating. This was easily relieved by alkalies and taking food. Since that time he has had occasional similar attacks of distress with an empty stomach and has considered them due to hyperacidity. He has always been subject to looseness of the bowels, that is, three or four loose movements daily without pain. He has always had a rather weak stomach.

Two years ago, after an unusual amount of hard work and worry, he began to have more trouble with his stomach and lost considerable weight. The trouble consisted of epigastric pain and burning two hours or so after eating and very often at night also. There was at the same time a looseness of the bowels amounting to a diarrhea, so that he became quite weak and was unable to do his ordinary work. Resting and milk diet brought about improvement, but on working again he found that he was subject to irregular attacks of trouble with his stomach which lasted from a few days to about a week. In the interval between the attacks he felt pretty well, but did not regain his weight. There was some vomiting during the attacks, nearly always at night. The vomitus consisted of food immediately eaten or, if the food had not been taken for one or two hours, of a thin watery substance. Nausea was slight and he was even able to eat during an attack. As a rule, food, especially milk, would relieve an attack temporarily. Bismuth

and bicarbonate of soda sometimes would and sometimes would not relieve an attack. He felt best on a full mixed diet with food between meals. Sometimes, apparently, an attack would be aborted by checking the diarrhea, which usually preceded an attack, and by securing a good night's sleep. The vomitus on several occasions showed large amounts of free hydrochloric acid, but never any blood. Frequent abdominal examinations were made, but were always negative. There was, at times, some slight tenderness in the epigastrium in the median line. He lost weight fairly steadily for about a year. The attacks grew worse in severity and in May, 1908, he went abroad for a month and had no attack while he was gone, although his bowels continued loose. On arriving home he had a very severe attack and went on a vacation and did not work in the summer. He had some indefinite epigastric disorder, but no regular attack. He did not regain his weight.

On returning to work attacks came on with rather more severity than before, the only difference being that there was no diarrhea. At this time he was fairly careful of his diet and was on a mixed diet with fairly low proteids and milk between meals.

About April of this year he had a rather severe attack of a similar type and a point of slight tenderness was made out just to the right of the umbilicus and slightly above it. He has recently been operated on and a duodenal ulcer found. Gastro-enterostomy was done and relief since the operation has been most satisfactory.

Clinical Department.

A CLINICAL CONTRIBUTION TO THE SUBJECT OF LESIONS OF THE UPPER SEGMENT SPINAL ARTERIES.

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IN the December number of the *Journal of Nervous and Mental Diseases* Dr. Spiller set forth the symptom-complex of lesions of the uppermost spinal and adjoining portion of the vertebral arteries.

Just previous to my reading his article, a case had been referred to me from an eastern state in which two well-known neurologists had differed as to the diagnosis and prognosis.

My examination of the case led me to make a diagnosis that was arrived at in part by the process of exclusion. But it was too indefinite to be satisfactory, and there was no opportunity for a post-mortem in my case inasmuch as the patient is living. Dr. Spiller's lucid paper determined me in my diagnosis.

The case is as follows: The patient is a male, fifty years old and married. His occupation is sedentary, but he has always taken plenty of exercise and kept himself in excellent physical condition. His family history is good on both sides. His previous history is that of a very healthy man. About eight years ago he had one attack of specific urethritis with an uneventful course and no sequelæ. About three years ago he says he noticed a raised blotchy eruption irregularly placed upon his body. He went for medical advice to the son of the old family physician who had treated him for the urethritis and was now dead. He was led to believe he had syphilis and was put on