GUNSHOT WOUND OF THE ABDOMEN. 437

Stated Meeting, December 10, 1902.

The President, Lucius W. Hotchkiss, M.D., in the Chair.

GUNSHOT WOUND OF THE ABDOMINAL CAVITY, LIVER, AND RIGHT PLEURAL CAVITY.

Dr. Joseph A. Blake presented a man, thirty years old, who was admitted to the Roosevelt Hospital, October 13, 1902, at 7 P.M., who just previous to his admission had been shot in the abdomen. He had always been well and strong and had indulged moderately in alcoholic stimulants. At the time of his admission there was a considerable degree of shock, extreme pallor of the face and lips, air hunger, and the respirations were rapid and shallow. The pulse was feeble and thready in character, but not increased in frequency; the temperature was 99.8°F.; respirations, 28.

Examination showed a bullet wound in the left hypochondrium, passing inward and backward through the outer border of the left rectus abdominis muscle, through which a probe could be introduced about four or five inches inside the abdominal cavity. The bullet was found embedded underneath the skin between the seventh and eighth ribs at the anterior axillary line of the right chest, and had evidently passed obliquely through the body. Examination of the right chest showed dulness below the angle of the scapula, with loss of voice and breathing sounds and a few moist râles. Over the abdomen there were marked muscular rigidity and tenderness, and slight dulness on percussion in the region of the flanks, the level of which changed with the position of the patient.

After the patient’s admission to the hospital, the evidences of internal bleeding became more pronounced, and an immediate operation was decided upon. This was done by the House Surgeon, Dr. A. C. Prentice. An incision, eight inches long, was made in the median line, from the ensiform cartilage to the umbilicus. Upon opening the peritoneum, a large quantity of free blood, fluid and clotted, presented. It was rapidly removed with the hands and gauze sponges. The bleeding was found to arise from a wound in the anterior surface of the left lobe of the liver,
and a second wound upon the superior surface of the right lobe, the latter considerably larger than the former, and extensively lacerated. The wound in the left lobe was packed with sterile gauze, which controlled the hæmorrhage. The wound in the right lobe could not be reached through the median line incision, and a second incision, three inches long, was thereupon made through the abdominal wall at the free border of the ribs in the right mammary line. Several strips of sterile gauze were packed between the right lobe of the liver and the diaphragm; the ends of these strips were brought out through the incision wounds, and the latter closed in layers, plain catgut being used for the muscular and aponeurotic structures and silkworm gut for the skin. The sutures were interrupted. Six days after the operation the cutaneous sutures were removed. Shortly afterwards, in a fit of coughing, the median wound gave way, and nearly all the small intestine escaped under the dressing.

The patient was immediately anæsthetized, the intestine washed and reduced, and the wound closed by deep sutures of chromicized gut and superficial ones of silkworm gut. There was some suppuration about some of these sutures, and they were removed, part of the wound healing by granulation.

INTRAPERITONEAL RUPTURE OF THE BLADDER.

Dr. P. R. Bolton presented a negro, forty-five years old, a stableman by occupation, who was admitted to the Hudson Street Hospital on November 9, 1902. On the day before his admission to the hospital (after two days' intoxication), he awoke with a pain in the lower abdomen. This was aggravated on movement, and gradually became more severe, soon extending over the entire abdomen. When the patient came to the hospital he complained of the severity of this pain; he stated that his bowels had not moved for two days, and no urine had been passed in twenty-four hours.

A physical examination showed that the heart and lungs were normal. The abdomen was somewhat distended; it was markedly tender over the whole area and tympanitic upon percussion, excepting over the bladder, which was somewhat flat. Upon the introduction of a catheter into the bladder, ten ounces of clear urine were withdrawn. The bladder was irrigated with
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salt solution, and the same quantity that was injected returned clear. Unsuccessful efforts were made to move the bowels by enemata.

As the abdominal distention and pain gradually grew worse, Dr. Bolton made an incision, four inches long, above the pubes, through which half a gallon of pale, amber-colored fluid escaped from the abdominal cavity. The intestines were somewhat inflamed, and on the posterior surface of the bladder a rupture, half an inch long, was found, the edges of which were covered with a fibrinous exudate. The rupture was closed with a double row of silk sutures. A cigarette drain was introduced through the abdominal incision and a tube inserted into the bladder through a small perineal opening. The abdominal wound was dressed every two days, and the cigarette drain was taken out at the end of a week. The perineal tube was removed on the twelfth day. After the tube was removed on the twelfth day, the patient was instructed to micturate about every three hours. There was no leakage. The urine at first contained a trace of albumen and some hyaline casts, but the latter subsequently disappeared.

The patient made practically an uneventful recovery, and was discharged cured on the 6th of December, 1902, after spending twenty-six days in the hospital.

Dr. Howard Lilienthal thought that, in the absence of any history of injury and instrumentation, it seemed more probable that this was a case of perforation resulting from some pathological condition of the bladder-wall.

Dr. Bolton, in reply to Dr. Lilienthal, said he had examined the interior of the bladder carefully with the finger, and could find no evidence of ulceration or other pathological condition of the bladder-wall.

UNUNITED FRACTURE OF THE LOWER EXTREMITY.

Dr. John Rogers presented a girl of thirteen, who, as the result of a fall nine years ago, sustained a fracture of the lower end of the tibia and fibula of the right leg. She was taken to Bellevue Hospital and treated by two competent surgeons by means of the plaster splint, but union failed to occur. The fragments were then wired and the splint reapplied and kept on for
two years, but without success. About five years after the latter operation had been done, sections of the silver wire were extruded through the skin during an interval of several months. Subsequently, a splint was again applied and she wore a shoebrace, but union did not take place.

When Dr. Rogers first saw the patient last May, there was a very evident fracture of the lower third of the tibia, with a motility almost equal to that of the ankle-joint. Upon opening up the parts, it was seen that the lower end of the upper fragment was a concave piece of bone, without any synovial membrane; the lower fragment was quite pointed, and united to the upper by a thin strand of cartilage. This cartilage was excised, the bony ends freshened, the two fragments sutured with chromicized catgut, and a plaster case applied. The operation was done almost three months ago; it was apparently not followed by the formation of callus, and only slight union has occurred. There were of treatment, good bony union seemed impossible or indefinitely and this of course still persists.

Dr. Rogers said he could not account for the lack of union in this case. There was no specific history or other constitutional disease, and no indication of rickets. The case was presented as one of that fortunately rare kind in which, in spite of the best of treatment, good bony union seemed impossible or indefinitely delayed.

Dr. F. Kammerer said that, while he had not seen any of these cases in recent years, he thought it was not very unusual that a bone should refuse to unite, even after repeated operative interference. He did not know that a satisfactory explanation of this occasional occurrence has yet been given.

SARCOMA OF RIB APPARENTLY CURED BY OPERATION AND COLEY’S FLUID.

Dr. Lilienthal presented a man, forty-eight years old, whose previous history was negative, who was under the observation of Dr. Alfred Meyer, of this city, for a number of months for an apparent enlargement of the seventh rib on the left side, in the region of the axillary line. The trouble had existed about nine months, and had commenced with pain and a crackling sound upon palpation over the affected rib. The external mass
had only existed about five weeks. There were no pulmonary symptoms. Since the onset of his symptoms, the man had been failing in flesh and strength. For several weeks he had been placed upon large doses of potassium iodide, but without resulting permanent benefit.

When the patient came under Dr. Lilienthal's observation there was a large, sausage-like mass over the seventh left rib, with distinct fluctuation at one point. A peculiar crepitant sound could also be elicited, which was characteristic of what was sometimes observed in sarcoma of the rib, and which he had also seen in tuberculosis of the rib.

November 15, 1901, an incision was made over the mass, and upon aspiration a syringeful of bloody serum was withdrawn. Upon dissection, it was found that not only the seventh but also the eighth rib was involved, together with the various tissues which covered them. An attempt was made to do a radical operation and extirpate the entire new growth, but this was found to be inadvisable on account of its extensiveness and the firm adhesions to the pleura. The main cyst, over the seventh and eighth ribs, was as large as a small hen's egg; it was lined with a smooth, glistening membrane, and filled with a serosanguinolent fluid. After evacuating this cyst, as well as a smaller one which was located far up in the axilla, a large section of the seventh rib and a part of the eighth were removed, together with a considerable section of the parietal pleura, which was so extensively involved that a total extirpation of the growth was out of the question. The wound was then closed, with drainage at its upper and lower angles, and the patient was sent to bed. He recovered well from the operation, but almost immediately a slight swelling was noticed at each end of the incision, and the man's general health continued to decline. It was then decided to use Coley's fluid, the preparation of Parke, Davis & Co. being selected. He was given five injections of half a minim, which were followed by reaction, and the dose was gradually increased to eight minims, which produced a severe reaction, so that the dosage had to be reduced. The treatment was continued for a period of about eight weeks, and from the very first an improvement in the man's condition was apparent. The signs of swelling gradually disappeared, and the patient's general health improved to an astonishing degree. His present weight was greater
than ever before in his life, and he considered himself perfectly well.

Specimens of the growth which had been submitted to Dr. F. S. Mandlebaum, Pathologist to Mt. Sinai Hospital, for microscopic examination had been pronounced pigmented sarcoma of the fibromyxomatous type. The principal point of interest in connection with the specimens was the infiltration of the sarcomatous tissue by the pigmented cells.

Dr. William B. Coley said that his own experience with the mixed toxins in the pigmented type of sarcoma had not been very satisfactory. Among at least a dozen cases of this kind, he had seen only temporary improvement, and he could recall only one—a melanotic sarcoma of the upper jaw, treated by Dr. George R. Fowler—in which the growth had disappeared entirely, but there was a recurrence after two years.

PYLORECTOMY, WITH WIDE GASTRIC RESECTION.

Dr. Lilienthal presented a Swedish woman, twenty-nine years old, whose present illness began five and one-half months ago with vomiting after meals, at first three times a day, but more recently only once a day, in the afternoon. The vomitus was acid, chocolate colored, and usually not less than a quart at a time. She also complained of heartburn, which was always relieved by the vomiting. Her appetite was excessive. Her bowels were regular; the urine was normal. In spite of the fact that she had lost thirty pounds in weight since last May, her general condition was fairly good, and she had been able to work uninterruptedly.

Upon her admission to the hospital, October 16, 1902, the patient was found to be markedly anæmic; there was considerable enlargement of the inguinal glands, other glands being normal; there was no jaundice; the heart, lungs, liver, and spleen were apparently normal; the abdomen showed a visible prominence in the median line, midway between the ensiform cartilage and the umbilicus. Upon palpation, this proved to be a hard, irregular mass, with a sharp lower edge; it was not tender, freely movable, and could be kept down by pressure.

October 16 the stomach was inflated with seidlitz powder, which resulted in a displacement of the mass to the right hypo-
LIGATION OF BOTH COMMON CAROTIDS.

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Dr. Lilienthal presented a woman, eighteen years of age. Nine years ago she lost the hearing of her left ear, and began to suffer from a continuous buzzing noise in the left side of the head. The corresponding mastoid was operated on, but no improvement resulted. Two years ago a double exophthalmus developed, more marked on the left side. The buzzing noise in her head had gradually grown louder, preventing sleep. She also suffered from constant headaches. Her eyesight was unimpaired; there was no diplopia nor goitre.

When the patient was admitted to the Mt. Sinai Hospital, early in November of the present year, an examination of the throat showed that the left tonsil was pushed forward, and posterior to it a large artery could be felt. There was a marked pulsating exophthalmus of the left eye and to a more moderate degree of

chondrium. There was always some free hydrochloric acid in the stomach washings; lactic acid was absent. October 21 a median abdominal incision was made between the ensiform cartilage and the umbilicus. Upon opening the peritoneal cavity, it was found that the pylorus and walls of the stomach were extensively infiltrated with a carcinomatous growth, which also involved the first part of the duodenum. There were a few enlarged glands in the gastrocolic omentum near the greater curvature. The greater omentum was freed along the greater curvature of the stomach and tied by chain ligatures. The lesser omentum and duodenum were also freed, and after clamping the latter, together with the involved pylorus, the tumor was excised. The operation was performed by Kocher's method, about one-third of the stomach being sacrificed. The duodenum was then implanted into the original wound made in the stomach, and interrupted silk sutures applied; these were reinforced by continuous Lembert silk sutures, and the upper half of the stomach wound was closed in the same way. A thin cigarette drain was introduced above and below the suture line. With the exception of a small leak at its upper extremity, the wound healed without complication. Since the operation, the patient had gained thirty pounds in weight. The pathologist reported that the growth was an adenocarcinoma.
the right eye; the pupils were equal and reacted to light and accommodation; the left eye could not be closed. There was a paralysis of the left side of the face. Posterior to and underneath the left ear there was an elongated, pulsating tumor, which became indistinct in the supraclavicular region: it gave rise to a distinct systolic thrill and a loud buzzing systolic murmur. The right jugular vein was prominent and a continuous bruit was present over its course. There was a faint systolic cardiac murmur.

An examination of the left ear revealed a small, rounded tumor of cavernous tissue situated just external to the drumhead, and in both ears the arteries and veins were dilated beyond their ordinary size. In the left ear the veins were almost tortuous in character.

A diagnosis of arteriovenous aneurism, probably in the region of the cavernous sinus, was made, and on November 11 the left common carotid artery was tied. On the following day it was noted that the exophthalmus was less marked and the pulsation of the left eyeball not so pronounced. There was also an immediate disappearance of the tumor underneath the left ear, and this has not returned since. The buzzing noise and the headaches, however, were apparently unchanged. On November 25 the right common carotid was ligated. Both carotids were found to be enlarged, especially that on the right side; its walls were thin, and it presented an anomaly in the fact that it bifurcated very high up. After this second ligation, the buzzing on the right side disappeared completely, but there was still some on the left side. The exophthalmus has markedly diminished and the headaches have practically disappeared. Within the past few days a slight thrill can again be felt on the right side.

PYLORECTOMY FOR CARCINOMA; NO RECURRENCE AFTER TWO YEARS.

Dr. F. Kammerer presented a patient upon whom he had operated for carcinoma of the stomach two years and four months ago. More than one-half the stomach was removed, including the whole of the lesser curvature; the divided ends were then sutured and a gastro-enterostomy done with Murphy's button. Since the operation the man has apparently remained in excellent
health, and there are no evidences of a recurrence. He has not increased in weight, neither has he lost. He claims to be unable to eat meat, but everything else he can digest. He occasionally has a sense of pressure in the region of the stomach. Dr. Kammerer said he had already shown this patient to the Society, about two years ago, in much the same condition as to-day.

THE ESTABLISHMENT OF AN ARTIFICIAL ANUS FOR THE RELIEF OF CHRONIC ULCERATION OF THE LOWER BOWEL.

Dr. Kammerer showed a woman, twenty-eight years old, upon whom he had operated for an ulcerative condition of the upper rectum, sigmoid, and colon by establishing an artificial inguinal anus with a prominent spur, in the right iliac fossa. The nature of the patient’s trouble was not apparent. There was no specific history, and she presented no symptoms which could be attributed to syphilis. The trouble had lasted, more or less, for three years. The patient had one healthy child, and had had one miscarriage. There was no tubercular history. The onset of her trouble was gradual. When admitted to the hospital, she was much emaciated; she suffered from rectal tenesmus, with bloody stools, containing mucus and pus in considerable quantity. The lower rectum was free, but beginning some six inches up an ulcerative condition was found with the proctoscope as far as the instrument would reach. The descending and transverse colons were painful to pressure. Antispecific treatment had no effect on her symptoms.

An operation was done May 19, 1902. As soon as the condition of the wound warranted such procedure, irrigation of the lower bowel was practised daily, first with normal salt solution and later on with weak solutions of nitrate of silver, the fluid being introduced into the rectum and escaping by the artificial anus. August 19 the inguinal anus was closed. During the period of treatment, extending over three months, the patient gained about twenty pounds in weight; this improvement has continued, the patient adding another eight pounds to her weight since the definite closure of the anus. She is now in excellent health, and has no pain whatever in the rectum; her bowels move naturally once a day. Dr. Kammerer said he had not made an
examination of the interior of the rectum recently, but it would seem natural to infer that the ulcers, which had healed before closure of the artificial anus, had not since reopened. The speaker said it seemed to him important in cases of this character to establish an artificial anus, and thus prevent any faecal matter from entering the colon. He was inclined to believe that this was an important point, which could not perhaps be as readily attained by operations not entirely excluding the large intestine from the faecal circulation.