# TRANSACTIONS
OF THE
# PHILADELPHIA ACADEMY OF SURGERY

*Stated Meeting held April* 5, 1920

The President, DR. GEORGE G. ROSS, in the Chair

## TOTAL CYSTECTOMY—CONDITION OF PATIENT FIVE YEARS AFTER OPERATION

DR. B. A. THOMAS presented a man, forty-six years of age, who was exhibited before the Academy four years ago. The case has been one of particular interest in view of his present state of health, and the nature of the apparatus necessary for deviation of his urinary stream. To the best of the reporter's knowledge this is the only case that has survived, for any length of time, the operation suggested by Watson, of Boston, in 1906; namely, separate nephrostomies, followed by total cystectomy as a third operative procedure.

The patient is employed at present as a mechanic in the Pennsylvania Industrial Home for the Blind. He is able to care for his apparatus routinely. His drainage apparatus is shown in the adjoining cuts (Figs. 1 and 2). It at present consists of two catheters, held in position in the fistulæ with the aid of safety pins and adhesive plaster, and connected by metallic joints to rubber tubing leading to two rubber bag urinals. In this connection it is worthy of note that perhaps no drainage apparatus, in such cases, will be permanently satisfactory. In this case, in the beginning, Watson's apparatus was used, but was soon found to be too bulky and heavy and was strenuously objected to by the patient. Subsequently, one of the urine receptacles of Watson's apparatus was placed over the hypogastric region, suspended by an abdominal belt, to which rubber tubing led from silver-flanged tubes placed in the urinary fistulæ. These at first were bulbous on the inside and fenestrated, but owing to phosphatic incrustations, necessitating their cleansing from time to time, and the difficulty of removal, had to have their bulbous expansions cut off, the tubes then being held in position by adhesive plaster, placed over the external flanges.

This patient had his first cystotomy in January, 1912, for nodular formations at the apex of his trigonum. A few months later these nodular formations recurred, and he was treated in another hospital by fulguration, with little or no improvement in symptomatology. In October, 1913, the patient was admitted to the Polyclinic Hospital and with Young's cystoscopic rongeur two or three of the small intravesical tumors, which at that time completely filled the lower half and neck of the bladder,

varying in size from a small pea to a cherry, were removed and submitted to Dr. John A. Kolmer for histopathological examination, who reported them to be inflamed polypi. The bladder was opened and the interior thoroughly cauterized with the electro-cautery, care being taken to destroy all evidence of these multiple polypoid growths. A few weeks later cystoscopy showed recurrence of the growths, and in January, 1914, the left ureter was ligated close to the renal pelvis and nephrostomy under ether anæsthesia performed. Five weeks later the right kidney was treated similarly, under stovain spinal anæsthesia, and on November 6, 1914, total cystectomy under ether anæsthesia was done, together with religation of the left ureter, because the lumen of the ureter had become reëstablished. This ligation was done with silk; the first having been done with catgut.

Three months later the patient complained of pains in his prostatic region and perineum, of a severe character, and on the presumption that the polypi were reforming in the prostatic urethra, where a few had been previously observed, on March 23, 1915, a perineal extracapsular prostatectomy and total posterior urethrectomy were performed under ether anæsthesia, from which the patient convalesced remarkably satisfactorily. In spite of this strenuous surgical treatment, he is still living and in remarkable health.

## INTRAPERITONEAL HERNIA OF THE ILEUM THROUGH A RENT IN THE MESENTERY

Dr. Henry P. Brown, Jr., in presenting the patient, said that from a fairly thorough review of the literature of the past twenty-five years it seems that hernia through a rent in the mesentery, while not being rare, is unusual. He had found reference to nineteen cases, to which he wished to add one that was admitted to Doctor Hodge's service at the Presbyterian Hospital, and upon which he allowed the reporter to operate.

The patient, a white boy of five years, was admitted to the hospital June 23, 1916. Chief complaint was pain in the abdomen and vomiting. While playing on June 21st he fell down two steps, striking on the dorsolumbar region. He was apparently uninjured and resumed play. That night he complained of abdominal pain and vomited a few times. He was given a dose of magnesium citrate which he vomited. On the 24th the vomiting and pain became more severe, and on the 25th a physician was called who diagnosed acute appendicitis and advised operation. His bowels moved the morning he fell, but not since. Although not complaining of much pain, the patient had the pinched features and fixed stare of a very sick boy. The abdomen was distended and very rigid. Peristalsis freely heard over upper abdomen. Tympanitic to percussion. Patient points to painful spot just below umbilicus, but no mass can be palpated. His leucocytes were 21,000 on admission; temperature, 101° F.; pulse, 140; respiration, 46.

Operation June 25th, third day after onset of condition. Ether anæs-

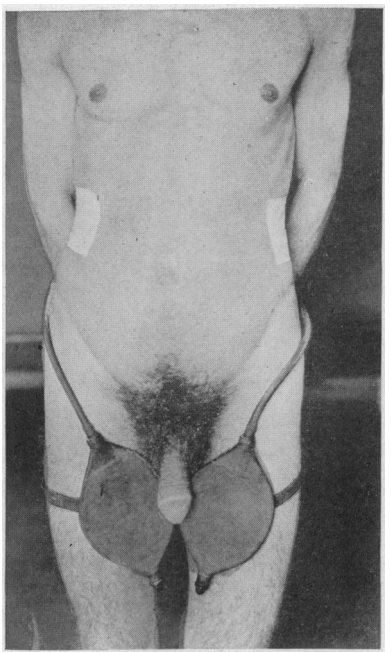

FIG. 1.

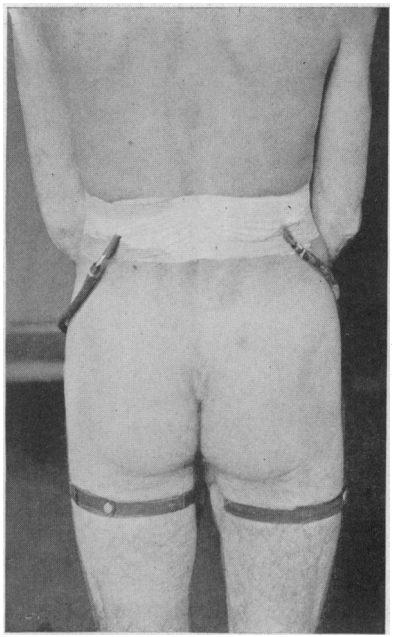

FIG. 2.

Drainage apparatus after total cystectomy.

thesia. Incision through outer border of right rectus muscle below umbilicus. On opening the peritoneum about one-half a litre of blood-tinged fluid escaped from the abdomen. A knuckle of twisted gangrenous gut, about 20–30 cm. long, presented in the incision, a coil of lower ileum which had passed through a 3-cm. opening in the mesentery, and had become twisted upon itself two and one-half times. The neck of the volvulus was cord-like in character. The opening in the mesentery, located about 5 cm. above the cæcum, had rough edges, apparently of recent origin. The gangrenous loop of ileum was resected and an end-to-end anastomosis was made with a Murphy button. The hole in the mesentery was closed, and the abdomen closed in layers. Hypodermoclysis was given. The patient died four hours after the operation.

A brief summary of the reported cases as collected from the literature is as follows:

CASE I (Reported by C. G. Franklin).—Man seventy-three years of age. Admitted to the hospital with symptoms of intestinal obstruction. Five days before admission, while in bed, he was seized with sudden abdominal pain and vomiting. Slght action of the bowels. Vomiting daily, it becoming feculent in character two days before admission.

Operation day of admission: Coil of small intestine 6 inches long, tightly strangulated in circular aperture in mesentery. Opening enlarged, bowel reduced. It was deep red, port wine in color and deeply indented by the ring. Recovery.

CASE II (Reported by J. G. Smith).—Boy of twelve years. Three weeks before admission had an attack of pain in right abdomen, accompanied by vomiting. Improved. Three days later another attack. Operation: Loops of strangulated intestine, very dark, through hole in mesentery. Easily reduced. Bloody fluid and serum in abdomen. Recovery.

CASE III (Reported by J. S. R. Smith).—Girl of fifteen years. Seized with sudden abdominal pain soon followed by vomiting. Symptoms of intestinal obstruction followed and lasted till operation on the fourth day.

Operation: Bowel greatly congested, small loop of bowel in a hole in the mesentery 2½ by 2 inches. Bowel judged capable of recovery—reduced. Hole had smooth thick margins—congenital in type. No history of previous injury. Recovery.

CASE IV (Reported by J. Clark).—Girl nine years old. Four years previously she had been run over by a trap. Went to bed feeling all right. Had sudden attack of abdominal pain and vomiting. When first seen fourteen hours after onset of attack, she was in a state of collapse. Complete intestinal obstruction. Death twenty-four hours after onset of attack. No operation.

Autopsy: Thirty ounces of bloody serum in the abdomen. Four feet of lower ileum had passed through an aperture in the mesentery, strangulated. Evidence of old peritonitis in this area of the abdomen.

CASE V (Reported by A. P. C. Ashhurst.—Boy of twelve fell and hurt his hip. Next day, dietetic error. Pains in abdomen, vomiting. Symptoms of intestinal obstruction for three days. Abdomen distended, vomiting fæces, blood and mucus by bowel. Umbilicus suggested presence of Meckel's diverticulum.

Operation: Fecal smelling blood fluid—black coil of gut in pelvis resembled volvulus. Resected 14-18 inches of intestine—end-to-end anastomosis—glass tube in pelvis. Death three hours later. Hole in mesentery—ileum passed through till stopped by base of Meckel's diverticulum. Loop of gut was twisted and gangrenous.

CASE VI (Reported by J. B. Deaver).—Sudden severe pain while cranking car—relieved in several days. Six months later while again cranking car had sudden severe

abdominal pain which did not subside. Admitted to hospital in dying condition. No operation. Post-operative examination: Strangulated gangrenous coil of intestine through a congenital hole in the mesentery.

CASE VII (Reported by W. A. Lane).—Boy of ten had sudden violent pain in central part of lower abdomen—vomiting. Thoroughly purged by family physician—two days later collapsed.. Complete obstruction of bowels—no previous history of injury or discomfort. Attack came on while asleep. In dying condition when admitted to hospital.

Operation: Second day, after onset. Mass of dark bluish intestine 3½ feet long passed through ⅞-inch hole in mesentery. Lower end was 2 feet above ileocæcal valve. Opening was rough. Foul smelling bloody fluid in the abdomen. Patient died on the table.

CASE VIII (Reported by L. J. Mitchell).—Boy of eight fell down-stairs, landing on abdomen—apparently unhurt. Two days later complained of severe pain in abdomen. Diagnosed peritonitis by outside physician. No operation. Died four days later. Post-mortem examination: Opening in mesentery near ileocæcal junction, smooth margins. Several loops of strangulated bowel, dark cherry red in color, had passed through it.

CASE IX (Reported by A. B. Atherton).—Boy of fourteen years. Subject to attacks of abdominal cramps since six years of age. Present attack started with dietetic indiscretion—was well purged with calomel. Seen two days after onset of symptoms, which were those of obstruction. Died three days later.

Operation: Removed a twisted Meckel's diverticulum, which relieved the obstruction. Died three days later. Post-operative examination: Loop of ileum 1 foot long through hole in mesentery, 6 inches from ileocæcal valve. It was not gangrenous and was easily reduced.

CASE X (Reported by Mauclaire).—Woman, twenty-one years. Signs of complete intestinal obstruction for five days. Mass palpated between umbilicus and pubes.

Operation: Strangulation of 30–40 cm. of intestine through hole size of palm of hand in mesentery. Margin of opening denoted that it was of long standing. She fell some days before the appearance of symptoms. Death ten hours after the operation.

CASE XI (Reported by E .C. Staab).—Woman of thirty-eight. Always suffered with constipation. No history of abdominal injury. Eleven days before admission she had severe abdominal pain which lasted five days, and ceased. Complete obstruction since first attack of pain. In state of collapse when admitted to hospital. Abdomen distended, not tense, no pain.

Operation: Large intestine collapsed from cæcum to sigmoid. On exposing small bowel, a portion slipped out of a hole in the mesentery. Circular hole in mesentery, ⅝-inch in diameter, 3 inches from cæcum. Blood supply to intestine was good. Died from collapse eight hours after operation. Post-mortem—nothing further was found.

CASE XII (Reported by F. W. Speidel).—Man shot by companion while out hunting, part of charge entering thigh and arm. While on way to hunt had sudden attack of cramps, and had a bowel movement. At the instant shot was fired, he threw up his hands and pitched forward on the ground. He had severe abdominal cramps which became more severe while on his way home.

Examination showed no evidence of wound to the abdomen. Pain one inch below and to right of umbilicus—vomiting bile. Was given morphine freely, in three hours he having received ten ½-grain doses by mouth and five ⅛-grain doses by hypo. "In short time he was given a dose of opium and in fifteen minutes he was quiet." Next day he was worse—obtained 2 ounces of urine per catheter. No vomiting. Bowels did not move since the accident. Calomel, oil and enemas failed to move him.

Operated on the eleventh day after onset of symptoms. Found a loop of intestine imprisoned in a hole in the mesentery—reduced. Patient died seven days later,

eighteen days after the onset, his bowels not having moved in that time. Fecal vomiting from tenth day to end.

CASE XIII (Reported by N. Macphatter).—Woman seventy-three years. No history of trauma. Complained of not feeling well—inability to move the bowels. On the fourth day she showed symptoms of acute intestinal obstruction.

Operation: Loop of intestine through mesentery—twisted—not gangrenous. Enlarged the hole in mesentery—reduced the bowel—closed the hole. Recovery.

CASE XIV (Reported by G. K. Dickinson).—Man forty-five years. Symptoms of acute obstruction.

Operation: General peritonitis. Hole in mesentery in region of cæcum—smooth margins—2 inches in diameter. A 2-inch coil of small intestine through the hole held in place by tip of gangrenous appendix.

Author does not mention duration of condition, condition of bowel, what was done, whether there was history of trauma or result.

CASE XV (Reported by W. D. Hamaker).—Woman seventy-two years. Obstinate constipation for many years. Sudden onset of symptoms of intestinal obstruction.

Operation third day after onset of acute symptoms: Meckel's diverticulum rolled up in one edge of gangrenous omentum. Rent in upper part of mesentery, through which passed all of transverse colon and omentum. Condition evidently of long standing. Opening was size of an egg. Removed Meckel's diverticulum and gangrenous omentum—reduced hernia. Recovery.

CASE XVI (Reported by C. H. Frazier).—Man thirty years. No history of trauma or dietetic indiscretion. Symptoms of acute obstruction.

Operated upon third day after onset. Exposed 18 inches of dilated congested small intestine, protruding through a slit in the mesentery. Easily reduced. Slit probably of long standing. He had an attack somewhat similar to the present one, thirteen years ago—vomiting, pain, constipation and cramps frequently since this first attack. Recovery.

CASE XVII (Reported by J. B. Roberts).—Man nineteen years. No stool for five days. Pain—distended abdomen Somewhat similar attack one year previous. Symptoms of acute obstruction.

Operation: In ileocæcal region, small intestine entangled in an opening in the mesentry—easily reduced—no gangrene. "There was apparently no actual protrusion of a loop through the mesenteric opening, but the bent intestine was seemingly thrust into the orifice in such a way that the sharp bend closed the lumen." Orifice seemed congenital. Recovery.

CASE XVIII (Glovanoff).—Incarceration of intestines in aperture of mesentery in closure of vitello-intestinal duct. Recovery.

CASE XIX (Herczel).—Intestinal incarceration with double volvulus in mesenteric opening. Operation. Recovery

Of these 20 cases, 3 that showed strangulation recovered. Seven with strangulation died. Two without strangulation died. Six that were not strangulated recovered. In one, the condition of the bowel and the result are not mentioned.

In no case was the condition diagnosed before operation. One condition of bowel not mentioned (gang?) died.

## REFERENCES

[1] Franklin, C. G.: Lancet, London, 1894, i, p. 334.
[2] Smith, J. G.: Brit. M. J., 1897, i, p. 1022.
[3] Smith, J. S. R.: Lancet, London, 1897, ii, p. 1111.
[4] Clarke, J.: Brit. M. J., London, 1905, i, 594.

[8] Ashhurst, A. P. C.: ANNALS SURG., Phila., 1910, i, p. 34.
[9] Deaver, J. B.: Surg. Gyn. Obst., 1920, vol. xxx, No. 1, p. 30.
[7] Lane, W. A.: Brit. M. J., London, 1890, i, p. 890.
[6] Mitchell, L. J.: ANNALS SURG., Phila., 1899, xxx, p. 505.
[5] Atherton, A. B.: Brit. M. J., 1897, 2, p. 975.
[10] Mauclaire: Bull. et Mem. Soc. Anat. de Par., 1899, lxxiv, 247.
[11] Staab, E. C.: St. Thomas Hospt. Reports, London, xxi, p. 172.
[12] Speidel, F. W.: Louisville Med. Monthly, 1895-96, ii, p. 479.
[13] Macphatter, N.: Am. J. of Surg., 1904-05, xviii, p. 232.
[14] Dickinson, G. K.: J. A. M. A., 1907, xlviii, No. 15, p. 1267.
[15] Hamaker, W. D.: J. A. M. A., 1914, lxii, p. 204.
[16] Frazier, C. H.: Phila. Med. Jour., 1899, iii, p. 174.
[17] Roberts, J. B.: Therapeut. Gazette, Philadelphia, December, 1915, p. 1964.
[18] Glovanoff: Voyenno Med. J., St. Petersburg, 1901, lxxix, med. spec., p. 1964.
[19] Herczel: Orvosi betil, Budapest, 1897, xli, 42.

## LARGE STONE IN THE BLADDER REMOVED BY SUPRAPUBIC CYSTOTOMY

DR. GEORGE ERETY SHOEMAKER presented a calculus and reported the case of a man, aged sixty-nine years, whose history was as follows: A rectal abscess was incised by his physician some four years ago, since which there has been occasional discharge of pus, and soreness in the perineum. Bladder symptoms have been confused by the patient with the rectal disorder, but for two years there has been increasing difficulty in urination with pain in both groins referred to rectum, down the thighs to the perineum and glans. The patient sits down cautiously, sidewise. Urination every one or two hours with much straining; it is accomplished only in the standing position with both knees bent and the right hip lowered. This peculiarity of position evidently gives a mechanical advantage over the obstruction.

X-ray and metallic sound demonstrated a large stone very low down and fixed. Only two ounces of fluid could be introduced, owing to the violent straining developed, and because of the valve-like action of the stone only a portion of the fluid introduced could be withdrawn by either a soft or hard catheter. There was a moderate amount of acidosis present; the heart was slightly irregular; there was some cough. The blood urea nitrogen was 14 and 7/10 mg. per 100 c.c. The phenosulphonephthalein test was 5 per cent. first hour, 8 per cent. second hour; total, 13 per cent. in two hours. The urine showed but little blood. The organisms present were staphylococcus and streptococcus of low virulence.

Because the bladder was contracted upon the stone which extended above the accessible point of drainage, it was felt that preliminary drainage would be unsatisfactory as a means of preparation for the strain of operation. The preliminary treatment was therefore confined to irrigation, somewhat imperfect, and a milk diet.

Conditions having improved, the p. s. p. test being now 30 per cent. in two hours, suprapubic extraction was done under gas ether. The peritoneum was successfully reflected without injury, assisted by

the introduction of a finger within the bladder. The surface of the stone was rough and friable, some scales adhering to the pocket behind the prostate where the stone was firmly adherent. The scales were carefully picked off and the wound closed down to a drainage tube. A daily irrigation was followed by one ounce of mercuro-chrome 220 one-per cent. solution which was left in the bladder. The drainage tube was out the fifth day. The bladder sinus was closed and normal function fully established the twenty-fourth day. The patient was discharged entirely comfortable, rising not more than once at night and holding the urine from five to six hours. A letter received a few days ago states that he is free from pain or distress; that the urine is clear and free from sediment, and that he rises once in the night. There is no leakage.

Of possible interest in connection with the origin of this stone is the fact that the patient was engaged in business in the far interior of the Honan Province of China some years ago, a region in which stone in the bladder is common. The weight of the stone was 313½ grams when removed. It has been sawed asunder and apparently contains no nucleus. It is composed of calcium oxalates and phosphates.

It may be mentioned that the use of mercuro-chrome appeared to contribute to the comfort of the patient and the freedom from infection during a smooth convalescence.

DR. ALEXANDER RANDALL presented a calculus which he thought was probably the largest human vesical calculus removed in modern times. The specimen belongs to Dr. Elmer E. Keiser. The patient was a foreman carder in a woollen mill, sixty-one years of age, slightly built, of medium height, and the father of ten children, the youngest of which is but four years old. Twelve years ago he passed by the urethra several small stones, since which time he has complained of frequency of urination, constipation, hemorrhoids, and has noticed hæmaturia on a few occasions. He likewise complained of a large hernia and great difficulty in properly retaining it. He consulted Doctor Keiser on July 17, 1919, having worked up to the first of that month. His complaint was severe constipation and difficulty with his hernia. On examination a hard tumor was found occupying the lower abdomen and extending from the symphysis pubis almost to the umbilicus. A hard catheter on introduction to the bladder grated on a surface that was believed to be a calculus, and withdrew one and a half ounces of clear urine that gave no evidence of blood, albumin, or sugar. An X-ray showed a remarkable shadow that was believed to be an osteoma of the pelvis. Operation was delayed in the hope of building up the patient's condition, but with no improvement operation was decided upon as a life-saving measure, and was performed on August 11, 1919, by Dr. Wm. H. Morrison at the Holmesburg Hospital, Philadelphia. The peritoneal cavity was not opened, the bladder wall was found markedly thickened, the stone firmly fixed in the pelvis. The patient died thirty-six hours after operation. The calculus

weighed on removal and in its moist state exactly 64 ounces, or four pounds: in its largest circumference it measures 48 cm. and in its lesser 40 cm., the deep impression with the ebonized surface is the imprint of the symphysis, while on the back can be seen the outline of the sacrum and the course of the rectum. The largest human vesical calculus removed as recorded by Gould and Pyle in "Anomalies and Curiosities" is that of Buffen found in 1739, and weighing over six pounds. In modern surgical literature the largest is that reported by Janeway in the *N. Y. Med. Jour.* in 1877 that weighed 51 ounces. Emerson C. Smith in *Surg., Gyn. and Obst.*, November, 1919, reports the successful removal of a stone weighing 38.5 ounces, probably the largest one removed without death. Sir Henry Thompson's "Catalogue of Collection of Calculi," published in 1893, reports numerous specimens of varying size up to 51 ounces. This stone now presented in its dry state weights to-day 56 ounces, and as far as we have been able to discover, is the largest specimen of authentic record.

## THE VARICOCELE OPERATION

DR. PENN G. SKILLERN read a paper with the above title, for which see page 508.

## GUNSHOT INJURIES TO THE CHEST

DR. GEORGE J. HEUER (by invitation) presented a paper, illustrated by lantern slides, with the above title, for which see page 352, September ANNALS OF SURGERY.

DR. JOHN H. GIBBON said that in probably no field of surgery, excepting joints, has there been greater advance than in the treatment of gunshot wounds of the chest. Of the very distinct lessons that surgeons can draw from their own war experience and that of others in regard to gunshot wounds, the most striking thing in the presentation of Doctor Heuer's communication is the results obtained in those patients not operated upon, and they constituted a large majority of the whole series. Another notable thing was the comparatively small percentage of cases of those not operated upon which required operation later and in this lies one of the lessons that we must apply in civil practice. There are very few simple penetrating wounds of the chest in view of this experience that would require immediate operation. One of the most difficult things one had to do was to get away from the habit of operating on these cases and to prevent others from operating upon them. Although we laid down the rule very often, he saw many cases of penetrating wound operated upon that had none of the indications for operation given by Doctor Heuer. To operate and drain means infection and always will. As to the remarks of Doctor Heuer as to what happens to cases in which the skin was not sutured, in a British base hospital in 1917, the speaker saw many cases of joint, abdominal and chest wounds that had been apparently properly treated which healed promptly and in which late infection took place under the skin, and required opening up afterwards; in the chest and joints infection of

the underlying cavities occurred. The abdominal cavity was not infected because the adherent omentum protected it. Therefore he concluded it would be a good plan to leave the skin open in these cases and later did so in a number of cases at a British casualty clearing station. He is now convinced that was a mistake. Doctor Heuer shows the cases did badly when the skin was closed. In regard to anæsthesia, he thought that all these infective cases, cases that were not operated upon at once and became infected later, should be operated on under local anæsthesia. Practically all the cases Doctor Heuer reports were drained under local anæsthesia. It is similar to operations in empyema which should be always done with local anæsthesia. One of the types of cases most instructive was combined abdominal and thoracic injury. Doctor Heuer reports a number of cases operated upon, although the abdomen was penetrated, in which there was no perforation of the abdominal viscera. They had a number of these cases in his evacuation hospital in which the abdomen had been penetrated and yet in which no operation was done and in which the patient got well. They established the rule there that if we were fairly certain that a hollow viscus had not been perforated and the chest wound did not require operation, no operation should be done. These cases were a great deal better left alone. Hemorrhage of the liver from gunshot wounds takes better care of itself than the surgeon can. When he starts in to stop it he usually makes it worse. These cases require the exercise of the best surgical judgment to determine those which should be operated upon and those which should not.

Dr. George J. Heuer in answer to the question regarding the expectant treatment of certain combined chest and abdominal injuries, said that in a series of thirty-nine combined chest and abdominal injuries, six cases were treated expectantly. In five of the cases the foreign body was embedded in the liver. Four of the six cases recovered; two died, one of gas gangrene of the leg, the other of lobar pneumonia of the lung opposite to that injured. Regarding the occurrence of hemorrhage and bronchial fistula during the process of sterilization of infected hæmothorax or empyema in fifteen cases of infected hæmothorax under his care abroad, neither hemorrhage nor bronchial fistula occurred following the use of Dakin solution irrigations. In the empyemata of civil life he recalled four cases in which hemorrhage had followed the irrigations. It has been rather interesting to note that hemorrhage in these cases has occurred late, at a time when sterilization of the cavity has almost been accomplished. Bronchial fistula has developed in the course of the irrigations in two cases.