

vaginal fistula which had developed shortly after the gall-bladder operation was the important feature at this time. Dr. Harte regarded it as the result of numerous turpentine enemas; at one time a spoon had also been used in removing hardened feces. Pure pus was discharged from the fistula about one week after Dr. Gibbon took charge and in a few weeks this was repeated. At these times there was a chill and rise of temperature and the patient developed a low sepsis. Dr. Gibbon concluded there was an abscess cavity in the abdomen, originating in the appendix or a tube, and emptying into the bowel. As Dr. Mitchell found the appendix normal when he operated, that organ seemed to be excluded. Because of the infiltration about the fistula a satisfactory examination of the tubes could not be made. Exploratory operation was possibly too long deferred but the abdomen was finally opened. The peritoneal cavity was full of light, straw-colored fluid. The tubes and ovaries were slightly adherent to the surrounding structures but no abscess was found. The rectum was adherent to the uterus and attempt to separate them resulted in the finger passing into the rectum. In closing the fistula, two other small openings into the vagina were found; the rectum was an unrecognizable cavity containing a quantity of pus. The patient was practically pulseless when operated upon and died in a few days of peritonitis. At autopsy it was found that three or four inches of the rectum in the hollow of the sacrum had sloughed. A small tract extended upward along the sheath of the psoas muscle but there was no distinct cavity at the upper end. No other pathological condition was found although a careful search was made. Dr. Gibbon believes that the lower three or four inches sloughed because of the injury done by the turpentine.

AN UNUSUALLY LARGE PREPATELLAR BURSA.

Dr. JOHN H. GIBBON presented this specimen which before removal was as large as the patient's knee. It was of several years' duration and had never been tapped. The work of the patient had not required the kneeling position. Portions of the bursa are so hard as to suggest the presence of calcareous material but the exact nature has not been determined as the sac has not been opened. A great deal of redundant skin was removed with the bursa. The bursa was dissected away from the patella without rupture and was shown after it had been hardened in formalin solution.

STATED MEETING, NOVEMBER 6, 1905.

The President, HENRY R. WHARTON, M.D., in the Chair.

SARCOMA OF THE BREAST IN A GIRL OF ELEVEN YEARS.

Dr. WILLIAM L. RODMAN presented a girl of eleven years upon whom he had operated for sarcoma of the breast. Through an unaccountable oversight the specimen was thrown away by the clinic attendants and hence a microscopic examination could not be made, but from the clinical history and the microscopic appearance of the specimen there seemed no doubt that it was a sarcoma. Certainly it was a neoplasm and was not encapsuled. Nearly a year ago the patient struck the breast, the injury being followed by pain. She was treated in the dispensary of the Jewish Hospital from Easter until September, the pain persisting and the growth increasing in size. When Dr. Rodman saw the patient, the growth was evident and was reasonably hard. Immediate removal was advised because the pain was increasing and also because of the large veins which ran across the tumor; he has never seen such veins in anything but a sarcoma. Three weeks ago the entire breast, including a large area of skin, was removed; the incision was carried well into the axilla but no enlarged glands were found. Sarcoma of the breast at any age is rare, there being ten or more carcinomas to one sarcoma. Dr. Rodman has not seen another case in so young a girl but recalls the reporting by Dr. Dugan, of Louisville, of a sarcoma in a girl of eight, and still younger have been observed; he had never before seen a neoplasm of any kind in so young a child.

LAMINECTOMY FOR PARAPLEGIA THE RESULT OF TUBERCULOUS DISEASE OF THE SPINE.

Dr. RICHARD H. HARTE presented a man aged twenty-six, who was admitted to the Orthopædic Hospital on September 5, 1904. There was no tuberculous family history obtainable. He

had suffered from pneumonia two years previous, had scarlet fever when five years old and diphtheria when seven. In 1896, when nineteen years old, he had typhoid fever which was complicated by phlebitis in both lower extremities, the right leg being the first affected. After three months of convalescence the leg ceased to swell. In 1898 he entered the army and in the course of his duties he fell and struck his left kneecap. The injury was not severe but there was much swelling and considerable pain. On June 29, 1898, he was admitted to the Pennsylvania Hospital under the care of the late Professor Ashhurt, with a diagnosis of tubercular disease of the left knee joint. Some iodoform emulsion was injected into the joint and a month later an abscess, apparently tuberculous in character, formed on the inner side of the right arm; this was opened and drained. Three months after his admission to the Pennsylvania Hospital the patient's knee condition improved and he left the institution walking on crutches. In the following May he returned to the hospital for examination and was under Dr. Harte's care. His limb was in good condition and he had a fairly useful knee and was allowed the use of his leg. After this date he states the abscess in his arm opened again and the shoulder became stiff. Two years later he was readmitted to the Pennsylvania Hospital and the knee joint was found to be so badly diseased that palliative treatment was no longer considered, and the limb was amputated by Dr. Hopkins in the lower third of the thigh, on October 23, 1901. The patient made a good recovery from the operation and returned to his home. Shortly after this he noticed a lump the size of a hickory nut on the lower dorsal region of the spine. He complained of pain in the lumbar region and was treated for lumbago. He was not seriously incommoded until June, 1904, when he began to suffer from what he described as "remittent fever." He was confined to bed for two weeks, and when able to be up noticed a numbness which he had felt for some months about his hips and which increased so that his foot was numb; in a short time he entirely lost the use of his body and limbs below the waist line.

He was admitted to the Orthopædic Hospital in September, 1904, paralyzed from the waist down. Sensation was markedly impaired throughout the affected area. He had incontinence of urine and feces and a very severe grade of cystitis. The stump of the amputated limb was in good condition. There was very

marked kyphosis in the lower dorsal region. Every effort was made to relieve the annoyance due to the incontinence; extension was applied to head and right leg and the bladder thoroughly irrigated twice daily. After about two months of treatment the sensation improved and the incontinence and cystitis disappeared. At this time he was able, with effort, to slightly move the great toe. He remained in this state for about five months and no further improvement seemed probable; the question of laminectomy was then considered. He was examined by some of the neurological staff of the hospital, who advised against operation. Nevertheless, on April 27, 1905, nearly eight months after his admission to the Orthopædic Hospital, with his desire, laminectomy was undertaken, although a cure was not looked for. The spines and laminae of the ninth, tenth and eleventh dorsal vertebrae were removed, thus thoroughly exposing the cord so that it could be approached from all sides. Considerable extradural tuberculous material was removed and the anterior portion of the neural canal curetted and made as smooth as possible. Practically no shock attended the operation and on recovery from the anesthetic the patient expressed himself as being able to feel the bed beneath him in a much more natural way than before operation. He was put to bed with extension and counter-extension to the head and extremity. The wound convalescence was uninterrupted. Gradually increased power in the great toe was developed and at the end of four weeks sensation was perfect all over the lower extremities. The toes could be flexed, the ankle-joint, right knee and amputated left thigh could be moved at will, although markedly ataxic. On July 1, three months after operation, a plaster cast was applied. This was worn until about September 21, when it was replaced by a brace. Since that time his ability to walk has steadily increased, until now, seven months after operation, he is able to walk as well as the average one-limbed person, although he is necessarily handicapped in the use of his crutches by the brace. The first of October he developed a small abscess in the right shoulder, which was evacuated and soon healed.

In this case it would seem that ample time had been allotted to treatment by rest, extension, etc., and that if this mode of treatment was to be pursued further valuable time would be lost and degenerative changes would soon be manifested in the cord,

which would materially interfere with the results from any operative measure which might be determined on at a later period. Operative treatment in this class of cases is much more applicable in adults than in children. In the latter most brilliant results can be obtained by extension, pressure, etc., as the age, anatomical conditions, etc., lend themselves more readily to this mode of treatment. In adult cases it is Dr. Harte's judgment that after a reasonable period of rest and extension in bed, if no positive results manifest themselves after, say, from four to six months, more positive and radical measures should be considered. He was inclined to think that the paralysis and symptoms occurring in this class of cases are due in a great measure to tuberculous and inflammatory deposits, thickening of the membrane in and about the canal, and that their removal by a laminectomy will give a thorough exposure of the cord and its membranes, both anteriorly and posteriorly, and will thus offer the best means of relief. This procedure should be carried, if necessary, even to the severance of some of the spinal nerves so that the operator can be positive that no point of pressure has been overlooked. In a very small percentage of cases will any bony or angular compression of the cord be found. The region of the spine most prone to these affections would naturally be the dorsal, where the lumen of the canal is more restricted and where a small degree of thickening will be followed by pressure symptoms. It is a well-known clinical fact that many severe grades of paraplegia may recover though great angularity still exists, provided the tuberculous and inflammatory deposits are absorbed.

A number of years ago the brilliant results reported by Macewen, Horsley, and others led the profession to believe that almost every case of spinal carious paraplegia would be cured by operation. As a result many cases were operated upon with disastrous results. The operators failing to recognize that in addition to the local condition, their patients were afflicted with a weakening constitutional disease when the reactive condition was very low and where operative conditions were contraindicated.

With regard to the operative technique Dr. Harte had found that the best incision is one directly down on the top of the spinous process quickly separating the muscles and thoroughly exposing that portion of the column. For a few minutes violent hemorrhage will result, but this is easily controlled by pressure.

After a thorough exposure of the laminae by removal of the spines with a large bone forceps a trephine can be applied and the neural canal thus carefully opened. After the exposure of the cord the other parts of the canal can be easily removed with a pair of Rongeur forceps. The trephine seems to be the simplest means of entering the neural canal, and after the removal of the disc the later steps of the operation are comparatively easy, little difficulty being experienced in exploring and examining the cord. In closing the wound deep buried stitches of chromicized catgut should be employed, insuring accurate approximation of all the overlying tissues, thus doing away with any possible dead spaces for clots to collect in and favor suppuration. The wound is preferably drained with gauze, as its contact with the cord is not liable to cause any undue pressure, which might possibly arise from the use of a drainage tube.

DR. DEFOREST WILLARD said the exceedingly favorable result obtained in this case by Dr. Harte was undoubtedly due to the thoroughness of the operation, which extended both above and below the principal lesion, and also to the fact that he was able to remove so much tuberculous deposit. If in these cases extensive pachymeningitis be present in addition to the deposit, operative benefits will not be so speedy or so satisfactory. Striking cases like the one shown by Dr. Harte were reported fifteen years ago by Macewen, Horsley and others and as a result the profession was deluded into thinking that all would give the same improvement. Laminectomy is an excellent operation in favorable cases; in others it is a total failure and relapses are numerous. In the case shown by Dr. Harte relapse is not likely to occur unless the man again becomes tuberculous. Dr. Harte spoke of the care needed in selecting cases and of the feebleness of certain patients contraindicating operation. A very good illustration of these statements is the case of a boy upon whom Dr. Willard operated recently who for twenty months had lain totally paralyzed from spinal caries. At last motion slowly returned in his legs but as the muscles had contracted so much that he could not bend his ankles, it was decided to divide the tendo-Achillis in order to allow more motion. This was done, the boy, roused from his ether, talked and seemed comfortable, then suddenly died in five minutes in spite of every effort made in his behalf. The result showed the poor general condition of the patient, death

following so trivial an operation as division of tendons, with the loss of about three drops of blood and with an etherization of only a few minutes in a patient with no discoverable renal or cardiac disease. These are cases that die after laminectomy.

DR. JAMES K. YOUNG said that Dr. Harte had very carefully selected his case in this instance, and hence had met with success.

The difficulty in selecting cases lies in the recognition of the pathological process which is present in an individual case. Only 2 per cent. of paraplegias are due to bone pressure and 25 per cent. to tuberculous masses, the majority being caused by pachymeningitis. These patients should be operated on early, and they are in England, but not early enough here, especially by orthopedic surgeons. The operation is often delayed until complete loss of sensation has existed for a long period, and until every other known means of treatment has been exhausted. Often they are allowed to continue without operation more than four or six months. Early spasticity and early contractures are indications for early laminectomy, no other symptoms being so urgent. In all cases where it is possible the anterior portion of the spinal canal should be carefully examined. The removal of tuberculous masses from the anterior portion of the cord is difficult and it is only in adults that it can be accomplished. The incision employed by Dr. Harte is the best of the various ones in use.

TWENTY-ONE GUNSHOT PERFORATIONS OF THE SMALL INTESTINES WITH RECOVERY.

DR. WILLIAM L. RODMAN reported this case, showing a specimen of six inches of jejunum containing three large perforations which was resected.

THE TREATMENT OF DIFFUSE SEPTIC PERITONITIS.

BY ROBERT G. LECONTE, M.D.,
OF PHILADELPHIA.

WHILE in Chicago a month ago I was astonished to hear Murphy say that in his last 29 cases of diffuse peritonitis he had had but one death; and the purpose of my remarks this evening is to recount his technique in these cases and bring the subject before you for discussion. The majority of us, I think, have been in the habit of douching the peritoneum with large quantities of sterile salt solution, with or without partial evisceration, where the infection was diffuse. This has been our practice at the Pennsylvania Hospital, and our mortality is probably between 70 and 80 per cent., for we receive many cases in the last stages of septic peritonitis, where operation is undertaken as the only chance in an otherwise hopeless condition. If more than 20 or 30 per cent. of such cases recovered, we fancied our technique was rather superior.

While the procedures of Murphy do not present anything particularly new, he has assembled in his technique all of the good things to do and has eliminated the unnecessary or harmful ones. His principles, from a theoretical standpoint, will appeal to everyone, and in practice the theory is sustained by the excellent results obtained. The essentials of his technique may perhaps best be stated under six headings:

1. The rapid elimination of the cause of the peritonitis, whether it be a perforation of the bowel, a gangrenous appendix, a ruptured pus tube, etc. This must be done with the least possible handling of the peritoneal contents.
2. Drainage by tube of the lowest portion of the pelvis through a suprapubic opening, and free drainage through the operative incision.

4. The semi-sitting position of the patient after operation, the so-called Fowler posture.

5. The absorption of large quantities of water through the rectum, which reverses the current in the lymphatics of the peritoneum, making the surface of that membrane a secreting instead of an absorbing one, and also markedly increasing the secretion of urine.

6. The prevention of peristaltic movements of the intestines by withholding all food or liquids by mouth, and perhaps by the administration of opium.

You will notice that none of these essentials is absolutely new, for all of us have practiced one or more of them at different times on different patients. But while doing some of them we have omitted others and at the same time perhaps have done things that were unnecessary and harmful to the patient. Let me elaborate these points a little more fully.

First. In removing the cause of the peritonitis the less the peritoneal surfaces are handled the better, for nature has thrown out protecting lymph which inhibits the absorption of toxic substances and in handling such surfaces there is danger of bruising and rubbing off the lymph, opening up a new avenue for absorption and infection. Therefore Murphy believes that no attempt should be made to sponge the peritoneal surfaces or to wipe off any lymph that may be found, as such manipulation would increase the danger of septic absorption.

Second. When the patient is placed in the Fowler position the fluids in the peritoneal cavity will tend to gravitate towards the pelvis, and in addition the action of the diaphragm during respiration will help to pump the fluids in that direction, making drainage of the lowest part of the pelvis with a tube very important. If there is sufficient fluid in the pelvis to fill the tube, each excursion of the diaphragm will pump a certain amount of it out, which will be absorbed in the dressing. It must be remembered that it is not the quantity of fluid present which is harmful, but rather the extent of the peritoneal surface which comes in contact with it, so that a quart

of pus contained in a round cavity would be less dangerous than an ounce thinly coating over the peritoneal surface.

Third. It is well known that patients with diffuse septic peritonitis stand a short operation well but a prolonged one badly; therefore, when all one's energy is directed to at once removing the cause of the peritonitis, and all other procedures except drainage eliminated, an operation can be speedily completed, on an average, perhaps in six or eight minutes. This naturally permits of a minimum amount of anæsthetic, thereby directly decreasing the chances of shock and vomiting after operation.

Fourth. The advantages of the Fowler position are so well recognized now that it only needs to be mentioned.

Fifth. Murphy's method of introducing large quantities of water into the rectum is novel. He inserts a nozzle containing three or four openings into the anus to which is attached a rubber tube leading to a bag. This bag is filled with water and elevated but a few inches above the plane of the rectum, the idea being that the water shall just trickle into the rectum not much faster than absorption takes place. In this way from a pint to a quart of water should be allowed to trickle in during an hour, the process being a continuous one and the flow so regulated that no accumulation of fluid takes place in the bowel. In other words, an attempt is made to run the water in as fast as it is absorbed. The object of having more than one outlet in the nozzle is that in case flatus accumulates in the rectum it will pass out through one of the openings in the tube while the others continue to discharge the water into the rectum. When it is desirable to stop the flow of water the tube is disconnected from the nozzle, the latter remaining in the anus, thereby avoiding irritation to the anus by the constant removal and insertion of the nozzle and at the same time facilitating the passage of flatus.

By this method large quantities of water will be absorbed within the first few hours after operation. This absorption does two things: First, It reverses the current of lymph in the peritoneal lymphatics so that instead of absorption taking place

from the peritoneal surface the mouths of the lymphatics pour out fluid, bathing the peritoneum with this free discharge. The posture, together with the action of the diaphragm, constantly sends this fluid downward to the pelvis, washing away the infectious material from the peritoneum in its descent, and escaping from the pelvis through the drainage tube. Second, The free absorption of the fluid from the rectum stimulates the heart and kidneys, and largely increases the amount of urine passed, eliminating through this channel the septic material which has gained entrance to the circulation. After the ordinary abdominal section in a non-septic case the average amount of urine secreted in the first twenty-four hours is perhaps 15 ounces, and in the presence of sepsis it is apt to be even less. In the first case that I shall report this evening more than 60 ounces of urine was secreted in the first twenty-six hours.

Sixth. Stopping all food and liquid by mouth will check peristalsis and prevent the dissemination of septic material by peristaltic movements. The absorption of large quantities of fluid by rectum is quite sufficient to sustain the patient for forty-eight hours or more, but if the condition of the patient is so precarious that food seems a necessity, small quantities of it can be run into the rectum with the water.

As an example of the results obtained by this method let me relate briefly the histories of two cases; one representing the fulminating type of perforating appendicitis in which perforation takes place within a few hours after the onset of the first symptom, without protecting abdominal adhesions; the other a case of walled-off appendiceal abscess in which the abscess had ruptured into the general peritoneal cavity, where no adhesions were present.

CASE I.—A small, pale, thin married woman, aged 26, was admitted to the Bryn Mawr Hospital at 11 A.M., October 11, while in her third attack of appendicitis. The attack began the previous day at 8 P.M., with a sharp abdominal pain, which gradually became agonizing, but which was suddenly much relieved at 4 A.M., the estimated hour of perforation of the appendix.

On admission the temperature was 100.2-5; pulse 112. An hour and a half after admission an incision was made through the right rectus, and immediately on opening the peritoneum there was an escape of a considerable amount of purulent fluid with shreds of lymph floating in it. The appendix was ruptured, partially gangrenous and bound down at its base by rather old adhesions, but the remainder was without adhesion to the surrounding viscera. There was a general diffuse peritonitis, (no attempt at walling off), with occasional patches of lymph coating the intestines, while the head of the cœcum was much inflamed, intensely red and the peritoneum had lost its glistening character. The appendix was removed, a puncture made through the abdominal wall in the median line two inches above the pubis for the admission of a drainage tube which led to the bottom of the pelvis. Another drainage tube was inserted through the operative wound leading to the right iliac fossa, while the remainder of the incision was filled with loose gauze. No sutures were used. The duration of the operation was six or seven minutes.

The patient was placed in bed in the Fowler position and the rectal enema at once begun. During the first twenty-four hours the patient received 12½ pints of salt solution through the rectum, not more than 6 or 8 ounces of which was expelled. The temperature ranged from 98 to 99¾, and the pulse came down to the 80's. She had a fairly comfortable night after ⅙ gr. of morphia had been given hypodermically. During the first twenty-four hours the abdominal dressings had to be changed twice owing to their complete saturation with a colorless fluid of a slightly sour odor, and in the first twenty-six hours 65 ounces of urine were passed. On the third day a little water was given by the mouth for the first time, and from then on the fluids were rapidly increased. The rectal enemas were stopped at this time. No purgatives were given and on the fifth day the bowels moved twice naturally. The remainder of the convalescence was uneventful, the temperature and pulse remaining normal.

CASE II.—An Italian aged 37 was admitted to the Bryn Mawr Hospital October 14, having been sick five days. The attack started with severe general abdominal pain and nausea. The pain shortly localized itself in the appendix region, and previous to admission he had two chills, with fever and sweats. On admission temperature was 102¾; pulse 120; respirations rapid; tongue dry; general appearance of typhoid condition.

The abdomen was opened through the right rectus and an appendiceal abscess was found, which had ruptured into the general peritoneal cavity, the pus swelling up through the incision with each respiration. A gangrenous, perforated appendix was removed, and the drains arranged as in the previous case without sponging the peritoneum or even removing the excess of pus which was flowing from the wound. The operation lasted about seven minutes. While on the operating table his pulse was recorded at 200.

During the first ten hours 9 pints of salt solution were given by rectum, about a pint of which was not retained. Temperature dropped to $98\frac{4}{5}$ and the pulse varied from 100 to 80. He passed 900 c.c. of urine during the first thirty hours. As in the previous case nothing was given by mouth until the third day, when water was begun and the fluids rapidly increased. On the third day, without purgatives, the bowels moved twice. The rest of the convalescence was uneventful.

These two patients recovered without a single untoward or alarming symptom. The rapid falling of the temperature and pulse to normal; the absence of further septic absorption; the free elimination through the kidneys of toxic material; the absence of distention, nausea and vomiting, etc., lead me to believe that the favorable termination was directly due to the method practised.

DR. JOHN H. GIBBON said that the method described in Dr. Le Conte's paper was a direct opposite of that advocated by many surgeons, in which the entire peritoneal cavity is thoroughly flushed and all of the lymph removed from the intestines. It is thought that many cases are lost because surgeons do not adhere strictly to either of these methods, that, is either a half-hearted irrigation is done, or else in trying to follow the Murphy plan too much is done. Murphy not only places these patients in the Fowler position after operation but has them brought to the hospital and placed upon the operating table in this same position. Dr. Gibbon stated that he had failed to introduce the large quantities of salt solution which Murphy recommended. He has employed the method in other respects in five or six cases with most satisfactory results. He lost one case treated in this way a few

days ago but believes that the patient died from a pulmonary embolus. Since reading Murphy's first paper two years ago Dr. Gibbon has used much larger quantities of salt solution but states that after every abdominal section which he has ever done he has used either plain water or salt solution in the bowel. He learned this from Baer, who advocated it strongly fifteen years ago. Dr. Gibbon strongly urged the employment of the Ochsner treatment *after* the removal of the appendix; he believes that frequently cases die from a spreading peritonitis the result of an active peristalsis. He always gives his abdominal cases morphia before they come out of ether; this he also learned from Baer, and has employed it in every case. The patients are much quieter during their recovery from the anesthetic and are much more comfortable. Many of the cases require but the one dose of morphia. If, however, the patients are restless, and if peristalsis is to be avoided the morphia is repeated.

Dr. Gibbon is now watching four cases of diffuse peritonitis treated after the plan of Murphy, with the exception that the enemata of salt solution were not so large, and in which not a single suture was introduced in the wound. Incision was made through the right rectus. Three of these patients are entirely well and show no evidence of a hernia. Where no sutures are introduced it is believed that the rectus incision is a much safer one than those which are more nearly over the appendix region. Another exception to the Murphy technique which Dr. Gibbon made in all of his cases is that of gauze drainage instead of tube drainage. He is careful to carry a large gauze drain back of the bladder, another to the right iliac fossa, and a third into the right kidney pouch.

DR. RICHARD H. HARTE said that there were two classes of cases with which the surgeon is constantly coming in contact: First, where the infection is diffuse and very acute and which when opened and drained invariably do well; second, those in which a similar condition has remained from twenty-four to forty-eight hours, during which time the toxic influences have been increasing enormously until the patient is profoundly poisoned, and his powers of resistance materially impaired. In the latter class when operated upon the prognosis is always exceedingly grave, it being impossible to say just what amount of toxine these patients can stand. It is here that most of the failures are to be

found. There is no doubting the fact that the method of Murphy, as emphasized by Dr. Le Conte, of keeping the bowel full of water, is an exceedingly good one, and its employment often decides between failure and success in the treatment of these cases. For many years Dr. Harte has pursued practically this method of treatment and has long appreciated the good results which come from it. He also is thoroughly convinced of the importance of keeping food away from patients after operation, as the too early ingestion of food is bound to be followed by fermentation, distention, etc., thus adding materially to the discomfort of the patient.

DR. LE CONTE, in closing, said in reply to Dr. W. Joseph Hearn, who asked him to report the results of the Murphy treatment in cases of peritonitis of several days' duration, that persons are usually dead that length of time after perforation and he does not see them. If they do live for days, adhesions are generally found enclosing pus in pockets and these adhesions need to be broken up. Where pus is free in the peritoneum the method of Murphy gives only the best possible chance of recovery. The operation lasts but a few minutes, the amount of fluid in the blood-vessels is increased, which stimulates the heart, and above all, by its introduction into the rectum, the fluid changes the current of the lymph stream and prevents absorption of septic products. If the patient be in the typhoid state, as was one of those reported by Dr. Le Conte, he believes much obnoxious material is passed out by the increased flow of urine from the kidneys. Usually only 12 to 15 ounces of urine are passed the first day after an abdominal operation, while in the case mentioned, 65 ounces were voided. This cannot be other than a great aid in eliminating toxic products. In answer to a question by Dr. Taylor regarding the length of nozzle for introducing salt solution into the rectum, Dr. LeConte said that two inches entrance was sufficient.

CANCER OF THE BREAST: CANCER OF THE CECUM.

DR. WILLIAM L. RODMAN exhibited these specimens. The first is interesting from a pathological and anatomical standpoint, as proving that the pectoral muscles should always be removed when operating for cancer of the breast. He has followed the teaching of Grossman and Ratler as regards the presence of glands between the two muscles, but had never before seen a clear

demonstration of the truth of such statements. In the specimen are three enlarged glands between the two muscles, and none of them was seen or felt until the greater pectoral was removed. The glands all lay well below the upper edge of the pectoralis minor.

The specimen of cancer of the cecum was removed post mortem from a man who had several months ago suffered from chronic intestinal obstruction. He was in a very bad condition when put upon the table, vomiting fecal matter and with a pulse beyond 130. The diagnosis of malignancy had been made some time before and it was quite clear that the only thing which could be done was an entero-anastomosis. When the abdomen was opened the diagnosis of carcinoma was evident, the growth appearing to have originated around the base of the appendix. Nodules of various sizes from a millet-seed to an olive were scattered over the intestines and mesentery. The small intestine was so greatly dilated as to look like the stomach; the cecum was collapsed. A lateral anastomosis between the ileum and the cecum was performed by the clamp method as employed by Moynihan in gastro-enterostomy. The relief from obstruction was complete, patient living three or four months entirely comfortable so far as the intestinal current was concerned. An opening three inches long was made between the small and large intestines. There were no further symptoms of obstruction at any time during the life of the patient.

DR. ADDINELL HEWSON referred to a case operated upon last June in which he found between the pectoralis major and minor a single tumor the size of a duck egg. It extended from the pectoralis minor backward to the vessels. Both pectorals were removed. Subsequent microscopic examination showed the tumor to be a cancer. Concerning the anatomical relations of the part there are two chains of lymphatics, one to the breast proper, the other to the pectoral muscles themselves. These two chains join before emptying into the general axillary chain of glands and the growth described was situated at the junction of the two chains. Dr. Hewson has never seen glands situated so high as are those shown by Dr. Rodman. In his own specimen the growth was directly in the middle of the pectoralis minor. Pressure may have prevented it going higher, the mass from the outside appearing as large as a fist.

As emphasizing the great distention which occurs in the gut in cases of cancer, Dr. Hewson mentioned a case which came to the Oncologic Hospital after having been operated on elsewhere. Through the operation wound in the left groin a soft rubber catheter could be passed to a point between the median line and the opposite groin.

CHEWING GUM REMOVED FROM THE BLADDER.

DR. E. H. SITER showed this specimen, which had been in the bladder four days. It was remarkable chiefly for the large amount of salts adherent to it. The gum had been inserted in the penis to prevent nocturnal emissions.

DR. WILLIAM J. TAYLOR recalled the fact that he reported to the Academy last year an instance of gum in the bladder, it having been inserted in the penis to stop a gonorrhoeal discharge. This had become encrusted with salts and formed a large stone. Perineal section failed to allow removal of the mass, which was finally secured through a suprapubic opening.

STATED MEETING, DECEMBER 4, 1905.

The President, HENRY R. WHARTON, M.D., in the Chair.

THE OPERATIVE RESULTS IN AN OLD FRACTURE OF THE
PATELLA.

DR. EDWARD MARTIN presented a man who in May, 1905, had by a direct fall upon the patella fractured that bone, the fracture probably being comminuted. Two months later he came to the hospital with his knee-joint absolutely stiff and very painful, the patella being firmly fixed by adhesion to the anterior surface of the lower articulating end of the femur, and also to the skin. Operation was performed in the usual way by turning a broad flap from above downward. The upper fragment was firmly adherent to the femur by tissue that was almost bony in character. After the removal of several small splinters, the bone and capsule were sutured in the ordinary manner, the patella with silver wire passed through drill-holes. The patient did well and at the end of three weeks went home with a freely movable patella and a painless smooth flexion of 45°. A few weeks ago he returned because motion in the knee was not sufficient to allow him to go upstairs readily or to stoop, positions required in his work. Examination showed that the joint appeared to lock and on forced flexion pain was felt on the outer side of the articulation. The patella was firmly united by bony union. Reopening the joint was considered, but under moderate anaesthesia flexion was carried to beyond a right angle. Two days later the joint was again bent, under ether, and the patella refractured. Dr. Martin now intends to allow the man to go home with a slight separation of the fragments (maximum in flexion $\frac{1}{4}$ in.) as this may give him a more useful knee; he has been allowed to walk about since the fracture. The case illustrates that it is not necessary to transplant a soft flap between a patella which has grown to the femur and the surface of the latter bone after loosening their adhesion as the