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COMPLIMENTS OF THE AUTHOR

ANTISEPSIS IN OVARIOTOMY

AND

BATTEY'S OPERATION.

SEVENTY CONSECUTIVE CASES WITH SIXTY-EIGHT
RECOVERIES AND TWO DEATHS.

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ANTISEPSIS IN OVARIOTOMY AND BATTEY'S
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SEVENTY CONSECUTIVE CASES—SIXTY-EIGHT RECOVERIES AND
TWO DEATHS.

By ROBERT BATTEY, M. D., ROME, GA.

Since my last report of this series of cases, made to the Association two years ago, the number has increased to seventy. The method followed has been essentially the same as heretofore. I have continued to use the carbolic spray, to immerse my instruments and sponges in solutions of carbolic acid of strength 1 to 40, the pedicle tied with carbolized silk, the abdomen closed with sutures of the same material. In all the cases the abdominal incision has been used in the *linea alba*. These cases have all been treated in my private infirmary.

Case 31—DOUBLE OVARIOTOMY.—Married, age 35, six children and several miscarriages, the last in February, 1884, at six months, of twins, after which she observed the tumor in the lower abdomen. When I examined her, the 22d of May, the tumor had made rapid growth since February. The abdomen projects strongly forward. The tumor, which is freely movable, is very irregular in outline, and knobby, but fluctuates distinctly. The uterus, behind the tumor, far back in the hollow of the sacrum, is freely movable. She thinks the tumor first appeared in the right side. She

Presented by the author



is thin in flesh and the pulse is small and rather irregular; appetite good; bowels normal.

Operation 29th of May, 1884.—Present, Drs. H. H. Battey, West and Dozier, Glover (M. S.) and Mrs. Battey. Opened the abdomen five inches, emptied one cyst with the trocar; several secondary cysts were incised and the gelatinous contents turned out. Extensive omental adhesions, otherwise free. The pedicle, long and broad, sprang from the left side, ligated in two parts and dropped. The right ovary, being also cystic, was ligatured and removed with a cyst of the parovarium. The abdomen contained a pint and a half of ascitic liquid. The omentum required several ligatures. The incision was closed throughout with carbolized silk. Patient was put to bed, in fifty-five minutes from commencement of the ether, in good condition with but slight shock. The stomach behaved well. The sutures were removed on the fourth and fifth days. The wound was dry and well united.

The maximum pulse 110 and the maximum temperature 100.5 degrees occurred on the afternoon of the first day. She sat up on the fifteenth day and returned home on the twenty-ninth day.

Case 32—BATTEY'S OPERATION.—Married, age 34, no children, two miscarriages, last one five years ago. Suffered with uterine troubles for twelve years. For five years she has been a confirmed invalid, and three years of this time entirely bed-ridden. She was two years under constant uterine treatment, with improvement the first year, but none the second. She complains especially of the spine and ovaries. The uterus is in good condition, and in proper position, but the ovaries are both prolapsed and very tender. These organs have always been tender and the seat of pain.

Operation 31st of May, 1884.—Present, Drs. H. H. Battey,

West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions. Abdomen opened one and three-quarter inches, both ovaries removed. The right ovary contained a hæmatic cyst which ruptured in removal; left ovary very small and shriveled, contained recent *corpus luteum*, several small, thin-walled, parovarian cysts with pellucid contents, were removed. She was put to bed without shock and in excellent condition. For three days there was considerable nausea and occasional bilious vomiting.

Sutures were removed on the third, fourth and fifty days. The maximum pulse 88 and maximum temperature 101.2 degrees occurred on the afternoon of the second day. She sat up on the fifteenth day and returned home on the twenty-seventh.

Case 33—SINGLE OVARIOTOMY—DEATH.—Widow, age 61, eleven children. She observed the abdomen enlarging near two years ago. In March, 1884, she consulted Professor Westmoreland, of Atlanta, who tapped her, removing eighty ounces of liquid, and advised against ovariectomy. She entered my infirmary the 3d of June, larger than before the tapping. The abdomen is uniformly distended with a compound cyst, which fluctuates freely, with considerable solid material about the base. The abdominal wall moves freely over the tumor, which can be lifted a little out of the pelvis, though not very much. The sub-cutaneous abdominal veins are enlarged and stand out plainly. The uterus lies behind the tumor and in the left side of the pelvis. It is senile and healthy. Her general health seems good, though she is thin in flesh and has indigestion; bowels regular; urine normal; tongue clean, a little reddened; heart and lung sounds are healthy. Notwithstanding her age and some suspicious symptoms, I deemed it proper to give her the chances of an operation, influenced by the consideration

that malignant deposits in an ovarian tumor, when cleanly removed, frequently do not return in other parts.

Operation 5th of June, 1884.—Present, Drs. H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opening the abdomen eight inches, I found extensive parietal, omental and pelvic adhesions, which were separated with difficulty. There were numerous thin-walled, pellucid cysts of the peritoneum of various sizes from a shot up to a walnut. A large cyst of the tumor, being tapped, yielded a gallon of thick, viscid, greenish liquid. The remainder of the tumor was composed of numerous cysts, with gelatinous contents, and a mass of cancerous material as large as the fist. Several of these cysts burst in separating adhesions and their contents escaped into the abdomen. A dozen ligatures were required to the adhesions. The pedicle from the right side was of good length and moderate size. The left ovary and uterus healthy, a rubber drainage tube was lodged in the lower angle of the wound. Weight of tumor, twenty pounds. The pulse was good throughout. She was put to bed in one hour in excellent condition and required no opiate. There was slight vomiting and moderate nausea. On the second day, afternoon, the pulse ran to one hundred and forty and the temperature to 102 degrees. The urine was extremely scanty, and she slept almost the entire day with but a quarter grain of morphia. On the third day, the pulse went to one hundred and fifty, temperature 102.8 degrees; secretion of urine entirely arrested. But a few drops could be secured by the catheter; she died at 4 p. m. Autopsy, two hours after death, by Drs. H. H. Battey and West. Body much emaciated, abdomen a little tympanitic, wound firmly united, except at site of drainage tube. There was no pus, about three pints of nearly odorless

bloody serum in the cavity. Douglas' space was closed in with adhesions, and contained a mass of soft, cancerous tissue, the left ovary and bloody serum. The bladder was empty; left ureter distended. The kidneys were apparently healthy, the capsules adherent, and the left contained in its pelvis, one and a half drachms of pale urine. The ovarian pedicle was healthy and no blood clots were found.

Case 34—*BATTEY'S OPERATION*.—Single, age 18. Prior to the first appearance of her menses at 14, she complained of pain in the left ovary, which has continued since. At first this ovarian pain was confined to the periods. But for two years past it is of daily occurrence, and in both ovaries, being especially severe at the menstrual epoch. Her general health otherwise is good. She spends most of her time in bed. The uterus is *in situ* and apparently healthy, though tender upon pressure. The ovaries are extremely sensitive, especially the left one. The tone of the stomach and bowels is in general good. The bladder has been irritable for two or three years. The pulse was one hundred and the temperature 99.5 degrees.

Operation 5th of July, 1884.—Present, Drs. H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Both ovaries were removed by abdominal incision. There were no adhesions. The left ovary, of double the usual size, contained a hæmatic cyst, which ruptured in handling. The right ovary was as large as a black walnut and contained several cysts with clear contents, two of which burst in removal. The uterus was very small, but otherwise healthy. The operation consumed thirty-five minutes. At 9 p. m. the pulse was 124, the temperature 102 degrees. The maximum temperature 103 degrees occurred upon the eighth day, the maximum pulse 126, on the ninth day, in

connection with acute inflammation of the right parotid gland, a metastasis from the ovarian operation. She returned home on the 11th of August.

Case 35—*BATTEY'S OPERATION*.—Single, age 35. She has suffered for twelve years with pain in the ovaries, aggravated at the menstrual periods. She entered my infirmary the 21st of June, 1884; had never been examined.

I found the uterus a little retroflexed, the vagina short and narrow. By rectal touch the ovaries were found prolapsed, enlarged and very tender. The *os uteri* is healthy, the cervical canal patulous, and there is no leucorrhœa. The seat of her malady is evidently in the ovaries. She suffers much with irritable bladder. The digestive organs are broken down. She has more or less constant nausea and daily vomiting, which has continued for more than a year. Medicine does little or nothing for her relief.

Operation 7th of July, 1884.—Present, Drs. H. H. Battey, West, Glover (M. S.) and Mrs. Battey. Ether, few drops chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Laparotomy, both ovaries removed, patient put to bed in twenty-five minutes. The ovaries were both enlarged, contained hæmatic cysts, with dark, grumous contents; no adhesions. The fallopian tubes, being healthy, were not disturbed. The maximum pulse 104 and the maximum temperature 101.5 degrees occurred upon the second day. She sat up on the 15th day and returned home on the 2d of August.

Case 36—*BATTEY'S OPERATION*.—Widow, age 45, one child. Has complained for several years of pelvic pain. There is uterine myoma, which is steadily growing.

Operation 22d of July, 1884.—Present, Drs. Hudgings, of Knoxville, H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized

silk ligatures and sutures. Opened the abdomen in median line through one and a half inches of fat. Removed both ovaries. Tubes healthy and not disturbed. The right ovary was cystic and contained a recently ruptured follicle corresponding to the last menses. The left ovary was scarcely half the natural size, but appeared to be healthy. The maximum pulse 92 and temperature 100.8 degrees occurred upon the second day. She sat up on the fifteenth day and returned home on the 22d of August.

Case 37—BATTY'S OPERATION.—Married, age 28, three children, youngest nineteen months. Invalid for nine years, complains of daily ovarian pain, especially aggravated at her menstrual periods. She entered my infirmary the 14th of July, 1884, with extreme sensitiveness of both ovaries, which did not admit of careful examination, except under the influence of an anæsthetic. There is slight catarrh of the uterus, but otherwise the organ seems healthy. The ovaries are greatly enlarged.

Operation 29th of July, 1884.—Present, Drs Lovelace and West, Glover (M. S.) and Mrs. Battey. Ether one and a half pounds, chloroform one ounce, very hard to impress. Carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the *linea alba* about two inches, removed both ovaries; the tubes being healthy, were not disturbed, operation twenty minutes. The ovaries were not adherent. The right, as large as a small orange, contained several cysts with clear contents, and *corpus luteum* corresponding to the recent menstruation. The left ovary, more than double the normal size, contained four hæmatic cysts. She was put to bed with a small weak pulse, 56 to the minute, and a temperature of 99.2 degrees. The maximum pulse was 76, the maximum temperature 101 degrees,

on the second day. She returned home to Arkansas on the 18th of August.

Case 38—SINGLE OVARIOTOMY.—Married, age 40, six children, last ten years ago. She has had no menses for eight years, and thinks she has passed the change of life. Her general health is fair. Eight months ago she felt bearing down sensations in the pelvis. She thought it falling of the womb and used a sponge pessary. She soon discovered a tumor size of the fist in the right iliac fossa and discontinued the sponge; for the past three months the tumor has grown rapidly and alarmed her; it does not give pain. The tumor rises above the umbilicus, and projects strongly forward like a pregnant uterus. It moves freely under the abdominal wall, is nearly central, but with more fullness in the right side. It is a little irregular and multilocular with one principal cyst which fluctuates distinctly. *Per vaginam* the tumor lies to the front and right side of the uterus, which latter is depressed, retro-flexed, and pushed into the left side of the pelvis. The uterine cavity two and three-quarter inches, moderate leucorrhœa, uterus tender to pressure. General health fair, tongue a little furred, bowels irregular.

Operation 16th of August, 1884.—Present, Drs. Gray, of Atlanta; Toole, of Alabama; Berlin and Barton, of Chattanooga; (med. students) Glover and Huzza, Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Operation done in twenty minutes. No adhesions, tumor from right side; the left ovary was white, hard, tunic, leathery and much corrugated, no *corpora lutea*. Pedicle was broad and thin, tied in two portions with silk. The tumor weighed twelve pounds, consisted of one principal cyst and several smaller ones. Patient put to bed without shock, rallied well and required no opiate. The maxi-

mum pulse 110 and temperature 102.8 degrees occurred on the afternoon of the fourth day. She returned home well on the 6th of September.

Case 39—SINGLE OVARIOTOMY.—Age 43, married, five children, last, November, 1883. She did not go down as usual after the last confinement, but distention went on rapidly until August 10th, when she was tapped by Dr. P. H. Brown, of Troy, Alabama, and forty-five pounds of liquid obtained, leaving a solid mass behind which he estimated at fifteen to twenty pounds. He aspirated two cysts, obtaining an amber-colored liquid from one, the other a dark wine color. She entered my infirmary on the 22d of September, 1884. She was thin in flesh, with moderate ovarian cachexia, abdomen tightly distended, skin shining, umbilicus effaced, lower extremities decidedly cedematous. The abdomen fluctuates freely everywhere and is dull on percussion. No solid material is to be felt in the pelvis. She is unable to lie flat on account of dyspnœa, and pain in the left hypochondrium. The great distention of the abdomen prevents a thorough examination of its contents. The appetite is fair, bowels somewhat relaxed.

Operation 23d of September, 1884.—Present, Drs. H. H. Battey, Lovelace and West, ——— Huzza (M. S) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Patient, being unable to lie down, was etherized in semi-erect posture. Abdomen opened from the pubes to the umbilicus. The abdominal wall was cedematous, and the recti muscles widely separated. The tumor was extensively adherent in the umbilical and left hypochondriac regions; also slight adhesions to the bladder. Two large cysts were emptied with the trocar, and a suspicious semi-solid mass was detached from the left hypochondrium where it had given rise to much pain. A number of liga-

tures were required to control hemorrhage from ruptural adhesions, one being placed upon the peritoneal surface of the bladder. The pedicle, springing from the right side, broad and thin, was ligatured with carbolized silk in two portions. In the left ovary, a small cyst was simply opened and the abdomen closed in thirty-five minutes. The pulse flagged toward the last, but soon reacted without stimulus. The maximum pulse 110 and maximum temperature 101.8 degrees were observed at 6 p. m., after the operation. She suffered but little from nausea, required but little opium, and voided urine normally without assistance. She returned home well on the 21st of October.

Case 40—SINGLE OVARIOTOMY.—Married, age 47, five children, last eleven years ago. It is ten years since she first observed the tumor. Eight years ago she was examined by Dr. Alexander Dunlap, the distinguished ovariologist of Ohio, who, she says, pronounced the tumor uterine, declined to operate, and said she would not live three days if it were removed. In August, 1883, she was tapped in Atlanta by Dr. H. V. M. Miller, who drew off near six gallons of clear liquid, which looked greenish in the tub. Says the tumor disappeared entirely on tapping and was not to be found until it began to refill. Admitted to my infirmary 14th October, 1884. General health good, appetite excellent. Complains much lately of pain and tenderness in the right hypochondrium, for which she requires morphia. Thinks this pain was produced by a fall which jarred her very much. Abdomen large and heavy, fluctuates freely and gives the idea of one large cyst above and two smaller ones beneath it. Umbilicus flat, neither depressed nor pouting. The uterus does not appear to be enlarged, nor is there any solid material in the pelvis. Menses regular. But for the reported adverse opinion of one so experienced as

Dr. Dunlap, I should regard the case as a very favorable one.

Operation October 16th, 1884.—Present, Drs. F. H. Caldwell, of Florida; H. H. Battey, West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen five inches. Found extensive and very firm parietal adhesions. Emptied a large cyst containing more than five gallons of deep yellow, albuminous liquid. Detaching adhesions, the cyst wall gave way at several points. Indeed, in places it was difficult to say what was cyst wall and what was peritoneum. In the upper and posterior portions of the sac several patches of semi-cartilaginous material existed and a number of secondary cysts with grumous contents. The posterior wall of the cyst was adherent at one or two points to the intestines. The pedicle, springing from the left side of the uterus, long and broad, was ligatured in two parts with carbolized silk and dropped. The right ovary indurated and corrugated, the outer third, occupied by a firm, yellow, cheesy mass, was left undisturbed. Wound was closed with rubber drainage tube at lower angle. Weight of tumor and contents, fifty pounds. Was put to bed in one hour, with feeble pulse, but soon reacted. Maximum pulse 110 and temperature 100.8 degrees occurred on the afternoon of the second day. Her recovery was uninterrupted, and she returned to her home in Tennessee the 9th of November.

Case 41—SINGLE OVARIOTOMY.—Married thirty-four years, age 52, eleven children, but one living, sixteen years old. Changed life five years ago. Two years ago the abdomen began to enlarge, and she had much medical treatment for supposed dropsy and enlarged spleen. For the last eight months the tumor has developed rapidly with complaint of indigestion and dyspnœa. The 4th of September, 1884,

tapped, nine pints of dark, straw-colored liquid, containing much albumen, and towards the last, thick and oily. She entered my infirmary the 21st of October, 1884. Urine normal and free from albumen, abdomen loose and not greatly distended. Sac was not quite refilled. Fluctuation free as if one cyst occupied the right side, umbilical and hypogastric regions. In the left hypochondrium is a hard mass resembling an enlarged spleen, which extends four inches below the ribs and is not tender to pressure. In the right iliac region there appears to be a second cyst. The pelvis is free of solid material, uterus freely movable, lies behind the cyst and not enlarged. Fluctuation from above is not distinctly felt in the pelvis. Her general health is good; she has no pain. The outlook for an operation seems excellent.

Operation 23d of October, 1884.—Present, Drs. McRee, of Alabama; H. H. Battey, West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches, subcutaneous fat one and a half inches. Tumor free of adhesions, one large cyst, very thick, viscid contents, several smaller cysts with gelatinous contents, besides much solid material. Pedicle, short and thin, sprang from the left side, ligatured in two sections and dropped. More than a pint of albuminous liquid removed from the abdominal cavity. The right ovary is very much atrophied. Patient put to bed in good condition without shock. Maximum pulse 120 and maximum temperature 102.5 degrees occurred on the afternoon of second day. She made a prompt recovery, and returned home well to Alabama the 21st of November.

Case 42—BATTEY'S OPERATION.—Married, age 24, one child four years old, no miscarriages. Her general health previous to her pregnancy had been excellent. During pregnancy she suffered greatly with pelvic pain which continued after the

labor. Has grown steadily worse till the present time. She had also endometritis, and has been for more than three years in the hands of specialists. She finds relief only in morphia and brandy. Entered my infirmary 23d of October, 1884. She complains of constant pain in the right ovary with occasional pain also in the left. Both ovaries are very sensitive to pressure, the right extremely so.

Operation 27th of October, 1884—Present, Drs R. E. Green, of Gainesville; H. H. Battey and West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the median line, one and a quarter inches of sub-cutaneous fat. The uterus is normal. The ovaries both adherent by lymph to the surrounding parts, and bands of lymph extending from them to the body of the uterus. The ovaries were brought into view with much difficulty, and removed entire, together with the fallopian tubes, ligatures being placed low down upon the broad ligament on either side. The left ovary was quite small and very vascular, as also was the right which contained a cyst as large as a hickory nut. There was neither thickening nor corrugation of the *tunica albuginea*. Deep down imbedded in the right broad ligament was a small, firm mass which might be a supplemental ovary. Its removal was not attempted. Operation occupied one hour. Patient put to bed in good condition; at 11 p. m. the pulse was 130 and the temperature 104 degrees. This was the maximum. This patient proved unruly, and suffered from protracted nausea and vomiting. Her convalescence was tedious, but she returned home on the 6th of December, bright and happy, feeling better than she had done at any time in five years.

Case 43—**BATTEY'S OPERATION.**—Married, age 26, two children, youngest three. History of dysmenorrhœa from

her girlhood. For six years she has suffered great pain in the hips, lower abdomen and ovaries. The past five months she has been entirely bed-ridden and much prostrated. Menstruates usually once in eight weeks with very scanty flow. Appetite and digestion poor, obstinate constipation, very nervous, almost constant headache. Entered my infirmary 13th of November, 1884.

The uterus is normal in position and seems to be healthy. The ovaries are not enlarged, but very tender to the touch, and the seat of almost constant pain. The menses appeared very scantily November 21st, and continued with but slight show until November 24th.

Operation 26th November, 1884.—Present, Drs. Paul Lawrence, of Louisiana; H. H. Battey, West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Being temporarily disabled by a poisoned wound myself, the knife was used by Dr. H. H. Battey. Abdomen opened, the ovaries being free of adhesions, brought into view and removed with facility. Patient was put to bed in good condition, rested without pain. The ovaries presented the thickened, blanched and corrugated *tunica albuginea* characteristic of cirrhosis. The maximum pulse 110 and temperature 101.6 degrees occurred on the twelfth day. She returned home on the 17th of December, well-healed and in better health than she has been in years.

Case 44.—**BATTEY'S OPERATION.**—Married, age 40, never pregnant. Had her menses at twelve with pain. She has had almost constant pain in the ovaries, especially the left, for ten years. The menses are irregular and excessive. She is decidedly neurotic and deprived of all enjoyment of life, a great and constant sufferer. Admitted to my infirmary the 12th of November, 1884. The uterus is normal, the

ovaries both very tender. Her nervous system is much broken down and mind markedly impaired. Menses appeared November 22d.

Operation November 29th, 1884.—Present, Drs. H. H. Battey and West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Being still disabled myself, Dr. H. H. Battey used the knife. Opened the abdomen in *linea alba* through one and three-fourth inches of sub-cutaneous fat. The ovaries non-adherent, but with pedicle very short, were brought into view with difficulty. Ligature upon the left side slipped from the pedicle and was re-applied, it being necessary to include the fallopian tube, which, however, was not removed. The left ovary was cystic and contained a recent *corpus luteum* corresponding to the late menses. The right ovary was shrunken, thickened and corrugated. Patient was put to bed with feeble and slow pulse, not more than thirty to the minute. At 7 p. m. the pulse was 48, the temperature 99.2 degrees. Nausea and retching. On the second day the pulse rose to 56, temperature 99.4 degrees. Third day, pulse 60, temperature 99.6 degrees. Fourth day, pulse 66, temperature 98.8 degrees. She returned home to Alabama on the 18th December.

Case 45—BATTEY'S OPERATION.—Married, age 36, four children, youngest five; bad health since last confinement. She complains chiefly of pain in the right iliac fossa. At her periods she describes a hard lump in that region which disappears with the flow. For three years past the menses have been very irregular, at one time an interval of nine months, recently of four months. Great exacerbation of pain when the period should occur, and vicarious menstruation, sometimes rectal, sometimes nasal. For a year past the mind becomes unbalanced at her periods, and she is

insane from four to ten days. In the interval the mind is impaired and dull. These attacks are not hysterical, but distinctly maniacal in their character. Entered my infirmary the 19th of February, 1885, very much emaciated. Has been steadily losing flesh for three years. Appetite precarious, tongue clean, bowels constipated, urine normal. Uterus *in situ*, moderate catarrh, sound passes two and a half inches with moderate pain referred to the right ovary. Both ovaries are abnormally sensitive to the touch, especially the right, which is enlarged. There is mental hebetude, but no maniacal manifestations. She has but recently recovered from an attack. The 21st of February she had one of her insane paroxysms. Complained of intense soreness, could not bear the slightest touch, wet her bed.

Operation 23rd February, 1885.—Present, Drs. H. H. Battey and West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen one and a half inches in the median line. Removed both ovaries with great facility. Whole operation completed in fifteen minutes. The ovaries presented a blanched and thickened tunic; no *corpus luteum*. The tubes, being healthy, were not interfered with. Patient put to bed in good condition, without shock, without nausea, but little pain, required no opium. Secretion of urine was very scanty. At 6 p. m., after the operation, the maximum pulse 94 and maximum temperature 99.8 degrees were noted. Returned home on the 23d of March.

Case 46—DOUBLE OVARIOTOMY.—Married, age 43, two children, youngest ten. Tumor observed half size of fetal head after last confinement. It is in the right side, movable, firm. Her physician, Dr. Patterson, of Louisiana, thought fibrous. The tumor reduced in size, and her general health improved until the fall of 1882, when she had pain in the

right side and began enlarging. In March, 1883, tapped six gallons. In October, 1883, tapped four gallons; then about every three months, nine tapings in all. The last, thirtieth of January, 1885, forty pounds. The hard tumor remained in the right side the size of child's head. Entered my infirmary 24th of February, 1885. She is in good flesh, florid complexion, looks healthy and cheerful, cold and cough for ten days, constipation and occasional indigestion. The abdomen is much distended and fluctuates freely everywhere, dull on percussion; pressing inward in the right iliac fossa, a firm mass is discovered, quite movable, uterus slightly enlarged, sound enters three inches with pain, feet and ankles swollen, urine scanty and high colored, free of albumen, and no casts. She has backache. For a week or two after tapping urine is abundant and clear

Operation 2d of March, 1885.—Present, Dr. John A. Barksdale, of Laurens, S. C., H. H. Battey and West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Incision from the pubes to the umbilicus, abdominal wall anasarcaous and loaded with fat. Tumor was universally adherent in front to the abdominal wall and omentum, and above to the spleen, stomach and the liver. At two points the adhesions were very firm, and required to be tied and cut. Six gallons of liquid were discharged from the sac and the tumor removed, ligating a rather thin pedicle upon the left side. A dermoid cyst of the right ovary, as large as an orange, was also removed. The oozing from ruptured adhesions was easily controlled by the pressure of sponges, only two ligatures being required at bleeding points. The principal tumor consisted of one very large sac, and numerous small cysts with gelatinous contents, also one cyst of four ounces capacity filled with soft, white, curdy material. The der-

moid cyst of the right ovary contained cheesy stuff with a lot of hair four inches long; no bones nor teeth. The right fallopian tube was spread out over the dermoid and was removed with it. She was put to bed in good condition, suffered but little from either nausea or pain. Cough was troublesome and required occasional doses of opium. Pulse and temperature ran low, except on the afternoon of the second day, when the pulse reached 132 and the temperature 102.6 degrees. She returned home to Louisiana on the 26th of March quite recovered.

Case 47—SINGLE OVARIOTOMY, DEATH—Married, age 34, four children, youngest six, menses irregular, appetite and digestion fair, bowels constipated.

Fourteen years ago she passed matter freely from the rectum, accompanied by balls of hair. For four years there were occasional passages of pus and hair. For three years past she has at times passed a few hairs with her evacuations. Two years ago she felt a quivering in the abdomen with pain. The menses were scant and irregular, the abdomen enlarging. She suspected pregnancy August 15, 1883; she had much pain and thought herself in labor. Her physician decided that she was not. October, 1883, she thought she felt distinct fetal movements. Dr. S. could feel these movements "so faintly that it was like a dream," but doubted the pregnancy; thought it might be extra-uterine. November, 1883, he decided she had ovarian cyst, and gave her absorbent medicines which reduced the flesh but not the tumor. She came to me November 20, 1884. The abdomen was enlarged, marked fluctuation in the left side and center, reaching up to the hypochondrium, also in the right iliac fossa and extending down into the pelvis. To the right of the umbilicus and above is a rather firm mass. She does not complain of pain. The uterus is normal in size and

movable. As there was no urgency for immediate interference, and my hand was disabled by a poisoned wound, she was advised to return home and await my recovery.

She was admitted to the infirmary again the 5th of February, 1885. She is slightly asthmatic, has for several years an occasional hacking cough. There is bronchial rale and dull percussion at apex of left lung. Probably some tubercular deposit. Examination of urine shows kidneys healthy. The menses appeared the following day. Before she could be gotten ready for operation she took cold, and had an irritating bronchial cough with little constitutional disturbance.

Operation 9th of March, 1885—Present, Drs. H. H. Battey and West (M. S.) Huzza and Mrs. Battey. Anæsthetic, chiefly chloroform on account of her cough, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen, let out a gallon of yellow serum mixed with jelly and much curdy material, which evidently came from the cyst. Tapped the cyst and removed it, with a mass of secondary cysts of gelatinous contents. There were adhesions to the omentum but none elsewhere. The pedicle on the left side was very short and thick. It was tied in two parts with more than usual care, deep down in the pelvis. On separating the cyst a full half inch from the ligatures, a profuse hemorrhage occurred from large vessels, one of the loops having slipped from the pedicle. Great difficulty was encountered in arresting the hemorrhage, which was finally done with compression forceps with much loss of blood. The patient was so much prostrated, the wound was closed with the compression forceps resting in the lower angle. In the later steps of the operation, it was necessary to lower her head and ply her freely with hypodermics of ether. At 6 p. m. the pulse was quick, but of better volume, the patient

hopeful; 9 p. m. she was resting comfortably. The following morning the pulse was 150 and the temperature 100.2 degrees. There was nausea and vomiting. She had nutritive enemata with brandy and opium, but gradually sank and died on the afternoon of the third day. Autopsy by Drs. H. H. Battey and West. Abdominal incision firmly united, leaving a small opening through which the forceps had protruded. Parts in direct contact with the instruments showed dark discoloration with local peritonitis. The coils of intestine were agglutinated. There were no clots. Eight ounces of dark serous liquid was found in the pelvis. The stump consisted of a large, short and fleshy pedicle, made up of adhesions which were attached principally to the omentum, bladder and rectum. The latter had an opening about two inches below the sigmoid flexure which communicated with the tumor. This was partially plugged with hair and was large enough to admit the little finger. Several teeth and particles of bone were found in the mass. The ligature had slipped on the uterine side of the stump where the blood-vessels were very large and had been secured by forceps.

Case 48—SINGLE OVARIOTOMY.—Widow, age 44, one child, 18 years, no miscarriage. In June, 1884, she noticed slight enlargement of the lower abdomen; in October she had pain to the right and below the umbilicus. The lower abdomen became very sore. Had fever, took her bed for some days. She entered my infirmary on the 5th of February, 1885. The abdomen is greatly enlarged clear up to the sternum, very tight, fluctuation marked and dull percussion everywhere. No intestinal resonance either lying or sitting. Left leg and thigh œdematous; slight swelling in the right leg also. The uterus is pressed back into the hollow of the sacrum, cervix normal, sound enters five inches. Menses appeared

on the 7th of February. On the 12th she had a slight rigor, followed by fever, which continued daily, in spite of quinine, up to the latter part of the month, the pulse and temperature ranging about 100 respectively.

Operation 16th of March, 1885.—Present, Drs. H. H. Battey, West and Tigner (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen four inches. Extensive adhesions to the abdominal wall, and to the lower margin of the spleen, which were separated with facility. Emptied thin-walled cyst of a large amount of pale, pea-green liquid; three small secondary cysts. The abdomen was not contaminated at all by cystic liquid. Pedicle on the right side broad and thick, tied in four portions and dropped. Weight of tumor and contents, fifty-one pounds. The left ovary cystic, with hydro-salpinx, is included in a firmly adherent mass, size of a large orange, dips deep downwards between the layers of the broad ligament without semblance of pedicle. It was deemed best not to disturb this until at a future time it might increase in size so that the sac could be stitched in the abdominal wall and properly drained; as the ruptured adhesions continued to ooze, a rubber drainage tube was lodged in the lower angle of the wound. The maximum pulse 110 and the maximum temperature 101.2 degrees were noted on the afternoon of the second day. She returned home to Alabama on the 9th of April.

Case 49—SINGLE OVARIOTOMY.—Married, age 42, never pregnant. For sixteen years she had uterine troubles with dysmenorrhœa and endometritis; she had local treatment four years ago with relief. About three years ago, the abdomen would swell and then subside. Since September, 1884, the growth has been steady, and of late rapid. She has suffered but little pain until the last three weeks, which she has

spent for the most part in bed. Three years ago she had "terrible dragging pains in the back and left side, followed by the discharge of nearly a quart of very offensive pus mixed with cores." The discharge of matter from the bowel continued nearly two years, and when this stopped the abdomen began to enlarge, at intervals the bowels became obstructed and she was very hard to purge. Four years ago she was treated for piles, at Buffalo, New York, with relief. She entered my infirmary 18th of March, 1885. The abdomen uniformly enlarged; projecting forward like pregnancy. The lower border of the ribs turned outwards. Fluctuation distinct everywhere, percussion dull. The uterus lies in front of the tumor and is but moderately movable. The os is in the median line. The fundus leans to the left iliac fossa as though pulled upwards by the right horn. Pulse 96, temperature 79 degrees, tongue furred, urine normal. Bowels purged with difficulty, requiring large doses of active purgatives to produce any effect.

Operation 21st of March, 1885.—Present, Drs. H. H. Battey, West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened in median line five inches. Two cysts were evacuated, several small, secondary cysts were withdrawn entire. The base of the tumor was so firmly adherent to the sigmoid flexure, rectum, cæcum and body of the uterus as to render its complete removal out of the question. The sac was, therefore, withdrawn from the abdomen as far as practicable, and its base secured in the abdominal wound. Weight of tumor and contents removed, 26 pounds. The maximum pulse 120 and temperature 103.2 degrees occurred upon the twenty-sixth day. She returned home to Arkansas on the 2d of June, able to travel alone, but with a sinus still discharging considerable pus.

Case 50—DOUBLE OVARIOTOMY.—Married, age 25, never pregnant. She has been subject to uterine hemorrhages for eight years, occasionally requires a tampon, a slight bloody flow nearly all the time. She entered my infirmary the 25th of March, 1885. I find a small mucous polypus hanging from the os, pedicle attached to the left wall of the uterus rather high up. Sound enters three and a half inches. The uterus is pushed a little to the left side by a tumor of the right ovary the size of a large orange, which is tender to pressure and moves separately from the uterus. Polypus removed with a wire ecraseur.

Operation April 2d, 1885.—Present, Drs. H. H. Battey and West (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the median line three inches. Found on the right side cystic ovary containing a quart of dark tea-colored liquid, right fallopian tube dilated, size of the thumb with watery liquid, left ovary also cystic, size of a small lemon. Removed both ovaries and the right tube. In spite of special care in placing the ligature upon the right side, the inner half slipped from its position, a moderate hemorrhage occurred before the vessels could be adequately secured. Rubber drainage tube lodged in the lower angle of the wound. Put to bed in good condition with fair pulse. Pulse reached 120 on the second and third days. The maximum temperature 102.5 degrees occurred on the morning of the second day. She convalesced slowly. Returned home to Alabama on the 14th of July. The ligatures having previously escaped at the abdominal wound, a small amount of pus still discharging.

Case 51—DOUBLE OVARIOTOMY.—Married, age 46, twelve children, youngest six. She had ovarian cyst of the right side twelve years ago. She was tapped by Dr. McCorkle 26th

of February, 1873, who got twenty pounds, by weight, of very dark liquid. In September, 1873, he tapped her again and got about the same quantity, not weighed, of mattery-looking liquid. She thinks it was wholly pus. January, 1874, it broke through the abdominal wall at the point of tapping and discharged pus for three years, when the tumor entirely disappeared. In 1882 she observed the tumor again in the right side with a hard lump at the point where she was tapped. She entered my infirmary the 2d of May, 1885. Her general health was fair, suffered but little pain, menses appear irregularly about once in three months and are scanty. Abdomen enlarged to size of pregnancy at term, but flat. It fluctuates below and in the flanks. There is ascitic liquid, which gravitates downwards as she changes position. In this liquid floats freely a firm tumor, which is anchored to the abdominal wall at the point of previous tapping two inches below the umbilicus, where the skin is puckered and drawn inwards, resembling the latter. The true umbilicus bulges in a fluctuating tumor the size of a turkey's egg. The uterine cervix is normal, freely movable, situated well back in the hollow of the sacrum, and somewhat elevated.

Operation May 6th, 1885.—Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches, liberating the adhesions of the tumor to the abdominal wall, giving vent to a viscid yellow liquid, in which floated numerous small, yellow, curdy masses. Removed a solid, decidedly cancerous mass attached by a good pedicle to the side of the uterus, being the degenerated right ovary. I removed also a cyst of the left ovary with good pedicle. This cyst presented a small opening which was discharging thick, muddy, albu-

minous liquid into the abdominal cavity, of which it still contained about two pounds. There was also cancerous deposit in the sac. The tumor of the right ovary contained a funnel-shaped mass of scaly bone. The peritoneal surface of the fundus uteri had a suspicious look, but no cancerous deposits were elsewhere found within the peritoneum. The abdominal and pelvic cavities were well cleansed with tepid water and free sponging. The wound closed throughout. She was put to bed in good condition and did exceedingly well. The maximum pulse 90 and the maximum temperature 100.2 degrees were noted on the afternoon of the third day. She returned home to Tennessee on the 6th of June soundly healed.

Case 52—SINGLE OVARIOTOMY.—Single, age 28, general health always good. Tumor first observed, in the fall of 1881, in the left iliac fossa. It was then firm and size of the fist. In the spring of 1883, she was tapped by Drs. Singleton and McGraw. About one gallon of liquid (not near all) was obtained. She has been tapped twelve times since, usually from six to eight gallons at a tapping; on the 13th of April, 1885, eight gallons were removed, and on the 7th of May six gallons of milky-looking liquid. She entered my infirmary on the 9th of May. She is a tall, large-framed woman, stout and robust. The abdominal wall is loose and flabby. The sac contains, apparently, one and a half gallons of liquid. In the left side of the sac is a hard mass, extending from the crest of the ilium nearly to the ribs. There is a similar lobule, though smaller in size, in the right side of the sac; sack itself is large and covers the whole abdomen, appears to be extensively adherent to the abdominal wall; the uterus is virginal, situated behind the sac, and freely movable. The tongue is clean, appetite and digestion good, dejections regular and healthy. She belongs to an epi-

leptic family, having two brothers who are epileptics, and she herself subject to *petit mal*—always at night while sleeping.

The *linea alba* presents numerous marks of the trocar from pubis to umbilicus.

Operation 19th of May, 1885—Present, Drs H. H. Battey and West (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen eight inches, gave vent to half gallon of ascitic liquid. The whole anterior surface of the sac was adherent to the abdominal wall, at several points so firmly that the cyst wall gave way in the separation. These adhesions extended to the descending colon in the left side and to the spleen, stomach and liver above. A portion of the contents unavoidably escaped into the peritoneum. Free oozing of blood from separated adhesions was controlled by large sponges without the use of ligatures or other hæmostatics. The pedicle in the left side of good length, broad but thin, tied in two parts and dropped. From the right tube sprang a cyst the size of a walnut, which was removed, together with the entire tube. The right ovary, being healthy, was not disturbed. The abdominal cavity was freely douched with warm water and well sponged. Being ready to close the wound, it was discovered by count that one of the sponges was missing. A careful search of the abdominal cavity, with the hand, failed to discover the lost sponge. Sponges were carefully re-counted, and a diligent search made of bowls and tub without result. Eventually the missing sponge was discovered in the abdomen, snugly enveloped in the omentum and removed. A rubber drainage-tube was lodged in the lower angle of the wound and the abdomen closed.

The patient was put to bed with moderate shock and rested quietly without opium. The weight of the tumor and contents was forty pounds. Within the sac was found a solid mass of cancerous deposit as large as the double fist. For twenty-four hours after the operation she slept profoundly, was roused with difficulty, seemed stupid. In the afternoon of the first day, the pulse was 120, temperature 102.5 degrees. On the third day, the maximum temperature 103.5 degrees was reached. On the twentieth day, she had an epileptic convulsion at night, and was put on bromide of potassium. On the twenty-second day, she had two convulsions, and one on the twenty-fourth day. On the 20th of June, she returned home to Alabama, travelling alone and quite restored.

Case 53—*BATTEY'S OPERATION*.—Married, age 31, one child, seven, no abortions. She has had uterine troubles dating from her confinement. Had local treatment for endometritis and displacement. She has suffered for years with the ovaries, especially the left. In September, 1882, she had oöphoro-mania, which continued about a year. In 1884, she was operated for lacerated cervix by Prof. T. G. Thomas, of New York, who advised removal of the ovaries if she did not improve. In May, 1885, the mind again gave way and she entered my infirmary on the 28th of that month, with much mental disturbance and pain in the ovaries, especially the left, which was very sensitive to pressure. Menses irregular. Tongue furred, bowels constipated, takes but little food.

Operation 2d of June, 1885.—Present, Drs. H. H. Battey and West (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. The ovaries were removed with much ease and facility through a very small incision in the linea alba. Tubes being healthy were not disturbed. The left ovary, of which

she chiefly complained, was shrunken, *tunica albuginea* corrugated, blanched and thickened. It contained a *corpus luteum* of about two weeks, corresponding to the last menstrual epoch, and also to the recent mental derangement. The right ovary, much enlarged, contained a cyst the size of a walnut. Patient put to bed in good condition without shock. Maximum pulse 150 and maximum temperature 102 degrees occurred in the evening after the operation. The mental state improved at once. She returned to her home in Alabama on the 3d of July in excellent condition.

Case 54—BATTEY'S OPERATION—Single, age 25, membranous dysmenorrhœa from her first menses. Passes membrane and clots at every period with much pain. There is constant leucorrhœa. For two years she has had constant ovarian pain, chiefly in the left, often in the right, and both ovaries exceedingly tender. She has had local treatment to the uterus to little purpose. She grows worse rather than better; is now wholly disabled from earning her support and dependent upon her friends. Her pelvic organs are extremely tender, especially the ovaries. The uterus is small and retroflexed. Both ovaries prolapsed into Douglas' *cul de sac*, the left enlarged. Menses recur irregularly with two to five weeks interval, and last seven or eight days, very free. She has had repeated attacks of acute proctitis, with occasional passage of pseudo-membrane.

Operation 10th of June, 1885.—Present, Drs. H. H. Battey and Lovelace and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened barely one and a half inches. Removed both ovaries and the left tube. The right ovary, which appeared healthy, contained *corpus luteum* of last menses. The left was enlarged and contained a cyst the size of a partridge egg. The left tube was enlarged and saccu-

lated, hydrosalpinx. Maximum pulse 90 the evening after the operation. The maximum temperature 100.2 degrees occurred on the sixth day. She returned home on the 27th of June soundly healed.

Case 55—BATTEY'S OPERATION.—Single, age 32. The menses first occurred at seventeen, were easy and regular. Five years ago had pains in the back, left thigh and leg, which were regarded as rheumatism. These pains have continued ever since, especially in the left leg, from the knee down. In December, 1884, she had severe pain in the sacrum and coccyx when she menstruated for the last time. She entered my infirmary the 8th of June, 1885. She was much emaciated and a martyr to neuralgia, bed-ridden since her last menstruation in December. She required two grains daily of hypodermic morphia to render existence at all tolerable. The uterus is normal and not displaced. Both ovaries extremely tender, chloroform being required to permit the touch.

Operation 11th of June, 1885.—Present, Drs. H. H. Battey and Nixon (M. S.), Glover and Huzza and Mrs Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened one and a half inches, both ovaries removed with facility, tubes healthy and not disturbed. Left ovary was enlarged and contained several cysts, right appeared healthy. Maximum pulse 80 and maximum temperature 100.7 degrees occurred in the afternoon of the second day. It required considerable effort to break up the morphine habit, but she returned home on the 13th of August well rid of it; is now in excellent health.

Case 56—BATTEY'S OPERATION.—Married, age 33, one child. Entered my infirmary 7th of November, 1884, with history of dysmenorrhœa and ovarian pain since the birth

of her child fourteen years ago. She had retroflexion of the uterus, endometritis, much tenderness of the ovaries. She was treated for six weeks with iodized phenol and returned home for continuance of treatment by her attending physician. She re-entered the infirmary the 1st of June, 1885, not at all improved during the interval. Her general health is fair, body well nourished. She complains of dysmenorrhœa, pelvic pain, and tenderness and inability to take exercise. The left ovary was much enlarged, prolapsed and fixed by adhesions, the seat of constant pain and very sensitive to pressure. The right ovary could not be distinctly mapped out, but was likewise very tender. She was again subjected to local treatment, but did not improve, and it was decided to extirpate the ovaries.

Operation 9th of July, 1885.—Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen through a full inch of subcutaneous fat, found both ovaries deeply imbedded in old and firm deposits of lymph, rendering their removal exceedingly difficult. The left ovary contained a small hæmatic cyst, a second cyst the size of a walnut, filled with clear liquid, which burst under manipulation. The left tube, being thickened and much enlarged, was removed entire with the ovary. The right ovary was very much shrunk, and the tunic thickened and corrugated. The right tube, though not enlarged, was firmly adherent to the ovary and was completely removed with it. It was necessary to adjust the ligature upon the right side, deep down in the pelvis, and a small fragment of ovarian stroma was unavoidably left in the pedicle, but the tube was removed entire. Put to bed in good condition without shock. The maximum pulse 96 and the maximum temperature 101.2 degrees

occurred on the afternoon of the second day. In consequence of the small portion of ovarian stroma left in the right pedicle, it was feared that the menses would still continue. This apprehension was realized in the re-appearance of the flow on the 23d day after the operation, when it continued the usual time, and has regularly recurred since with her same old pain. She returned home to Alabama the 24th of August.

Case 57—**BATTEY'S OPERATION.**—Single, age 23, menses appeared at fourteen with pain; she has had dysmenorrhœa ever since. She has been bed-ridden for eighteen months with daily and constant ovarian pain. She was subjected to local uterine treatment for over a year without relief. She entered my infirmary the 22d of April, 1885. Uterus retroflexed, tender, cervical catarrh. The ovaries are enlarged, prolapsed and very tender. I subjected her to local treatment with iodized phenol for three months without material benefit; advised removal of the ovaries.

Operation 18th July, 1885—Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Short incision in the *linea alba*; ovaries prolapsed, not adherent; removed with ease; tubes healthy; uterus small and strongly retroflexed. Especial care was taken to remove the ovaries cleanly and to leave the tubes intact. The right ovary was enlarged by the cyst, which burst in removal; tunic thickened and corrugated; *corpus luteum* a week old. The left ovary was shrunken, the tunic blanched and thickened. The maximum pulse 84 and the maximum temperature 101.2 degrees observed six hours after the operation. She returned home to Alabama on the 14th of October, 1885.

Case 58—SINGLE OVARIOTOMY.—Single, age 32, always in good health until September, 1884, when she observed the abdomen enlarging. In December she had her last menses. She has been much reduced by diuretics and drastic purgatives given for dropsy to no purpose. Entered my infirmary the 1st of August, 1885. Abdomen much enlarged and very tight; dull percussion and free fluctuation; feet and ankles œdematous. The uterus is small and pushed strongly against and above the pubic arch. Free fluctuation in Douglas' *cul de sac*.

Operation 4th of August, 1885.—Present, Drs. James A. Gray, of Atlanta; H. H. Battey, West (M. S.) Glover, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdominal incision five inches; small amount of ascitic liquid escaped. There were extensive adhesions in the left iliac and right hypochondriac regions. The abdomen was so tense that the principal cyst was tapped and four gallons of black viscid material removed before the adhesions were broken down. Portions of the sac presented a dark discoloration suggestive of impending slough. There was a mass of secondary cysts filled with colloid material of varying consistency. The liquid from the main cyst was intensely black and thick like molasses. Pedicle from the left side of the uterus was of good length but fleshy, and included the fallopian tube, very much enlarged and elongated, but with its fibriated extremity free. Pedicle ligatured with carbolized silk and dropped. Left ovary healthy, not interfered with; cavity was well douched with warm water and sponged. Wound closed throughout. Weight of tumor and contents, forty-seven pounds. Was put to bed in one hour in good condition. Within nine hours after the operation, four quarts of limpid urine were withdrawn from the bladder and the œdema of the extremities was

markedly diminishing. The polyuria continued the following day. By the third day morning the œdema was entirely gone. Maximum pulse 96 and maximum temperature 101 degrees occurred in the evening of the second day. She convalesced rapidly without opium. Returned home on the 24th of August sound and well.

Case 59—**BATTEY'S OPERATION.**—Married, age 37, two children, youngest seven. Bad health since her last labor. She entered my infirmary the 12th of August, 1885, a complete wreck; very feeble, much emaciated, digestion very bad, tongue a little furred, bowels kept open by daily laxatives. Prolapsed uterus supported by a ring pessary. The left ovary is enlarged and prolapsed, exceedingly tender to the slightest touch. She suffers pain in both ovaries, that in the left side extending down the limb to the foot. The os is excoriated and red, tender to the touch, moderate leucorrhœa. She says the pessary relieves her somewhat. It is strange she is able to wear it at all.

Operation August 15, 1885.—Present, Drs. H. H. Battey, West, (M. S.) Glover, Huzza and Mrs. Battey. Ether, trifle of chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen one and a half inches. Body of the uterus acutely retroflexed. The ovaries are prolapsed and adherent by lymph to the surrounding structures. Pedicles were so short it was deemed best to place the ligatures quite low and remove the tubes, notwithstanding they were quite free of disease. The ovaries were greatly enlarged and cystic. Maximum pulse 72 and maximum temperature 101.7 degrees were observed on the afternoon of the second day. She returned home to South Carolina on the 12th of September soundly healed.

Case 60—**BATTEY'S OPERATION.**—Married, age 24, two children; first still-born at term, choked by cord; second

two years ago, stillborn at seven months; bad health ever since. She has been subjected to local treatment of the uterus for two years without avail. She entered my infirmary the 23d of July, 1885. She is much confined to bed; cannot walk, finds it painful to ride. The pelvic organs are very tender to pressure. The os is slightly excoriated, endometrium tender, slight leucorrhœa. The right ovary is prolapsed, enlarged and cystic, very sensitive to the touch and the seat of much pain, radiating throughout the pelvis and down the right limb, requiring frequent doses of morphia for its relief. The left ovary is also tender to pressure and the seat of pain.

Operation August 19, 1885 —Present, Drs. Sanders, of Harris county, Ga.; H. H. Battey and West, (M. S.) Glover, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened two inches. The left ovary and tube were bound down by firm adhesions. There was really no pedicle. The ligature was passed well down in the broad ligament, but a small portion of ovarian stroma was unavoidably left behind. The right ovary and tube were completely removed. The right ovary contained two cysts, one hæmatic, the other, with yellow liquid, was large as a walnut. There were also two parovarian cysts of equal size. The left ovary contained a hæmatic cyst also. Both tubes were distended with dark, sanguinolent pus, the right one as large as my forefinger. There was considerable shock, but she rallied well and was put to bed. Maximum pulse 130 was observed in the evening after operation. Maximum temperature 103 degrees occurred on the 12th day, due to the malarial poison she had brought with her. On the 15th of October I removed a small keloid growth situated over the spine of the right scapula, which had troubled her for

several years. On the 19th of October the menses appeared and continued five days, and again returned on the 4th of November. She returned home on the 27th of November.

Case 61—DOUBLE OVARIOTOMY.—Single, age 22, always in robust health until May, 1884, when she had a fall from a horse and hurt her left side. First noticed her abdomen enlarging in August, 1884. Little or no pain, six months, menses too free and too frequent. She is in fair flesh and digestive apparatus in good state. She entered my infirmary the 2d of October, 1885. The abdomen is evenly rounded over, not projecting like pregnancy, nor flattened like ascites. Percussion dull everywhere, from pubes to ensiform cartilage and flank to flank. Fluctuation distinct above the umbilicus, below the tumor is elastic. Uterus healthy, *os in situ*. Fundus pushed to left side and a little backward. Sound enters two and a half inches, only moderately movable. She is a snuff-dipper.

Operation October 3d, 1885.—Present, Drs. Wells, of Chattanooga; Boyd, of Red Clay, Georgia; H. H. Battey, West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen five inches, no adhesions. Emptied a half gallon of thick, yellow, syrupy liquid. The remainder too thick and gelatinous for the trocar, I broke down septa and turned out the contents of numerous gelatinous cysts, and drew out a thick and fleshy sac. Pedicle attached to left side, of good length, broad and thin; ligatured in two portions and dropped. The right ovary large as a pullet's egg. Full of small gelatinous cysts, and kidney-shaped, was ligatured and removed. Cavity was contaminated with much cyst jelly and some blood. It was well douched with warm water and sponged; the wound was completely closed. Maximum pulse 84 and maximum temperature 100.5 degrees were observed five

hours after the operation. She returned home to Tennessee the 31st of October soundly healed.

Case 62—BATTEY'S OPERATION.—Married, age 29, four children, youngest two. Her health gave way at the birth of the second child; bed-ridden since the last confinement. Her digestive apparatus is much broken down, and her nervous system completely shattered. Entered my infirmary the 10th of September, 1884. Retroflexion of the uterus, prolapsed ovaries, endometritis, excoriated os. She was subjected to local treatment at my hands for thirteen months with but partial success. Much of what was gained in the intervals was lost at the menstrual periods. The prolapsed and tender state of the ovaries would not admit of any mechanical support to the displaced uterus. It was therefore deemed best, as a last hopeful resource, to extirpate the ovaries.

Operation October 21st, 1885.—Present, Drs. H. H. Battey, West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen one and a half inches; the ovaries were free with good pedicles, both removed. Tubes being healthy were not disturbed. Operation complete in twenty minutes. Both ovaries were enlarged and cystic. Uterus strongly retroflexed. Maximum pulse 90 and maximum temperature 100.7 degrees observed on the afternoon of the third day. She convalesced nicely from the operation and returned home to Alabama December 18th, 1885, much improved, but still quite feeble. During the winter she had pelvic inflammation and abscess about the left stump.

Case 63—BATTEY'S OPERATION.—Married, age 31, three children, two abortions. She has been troubled with ovarian pain since her first labor. For two years her suffering has been great, especially in the right ovary, with frequent attacks of giddiness and occasional *petit mal*. Digestive

organs broken down. She entered my infirmary November 27th, 1885. Uterus retroflexed, os patulous, leucorrhœa. Both ovaries are enlarged and tender, the right one prolapsed. Pain in the right ovary is constant and at times very severe. She is entirely disabled by it.

Operation November 29th, 1885.—Present, Drs. H. H. Battey, West and Mrs. Battey. Ether and chloroform, carbolic solutions, carbolized silk ligatures and sutures. Atomizer being out of order, spray was omitted. Abdominal incision barely one and a half inches. Ovaries free. Both removed. The tubes being healthy were not disturbed. Uterus retroflexed. Both ovaries were enlarged and filled with small cysts, some clear, others purple. In the right ovary, *corpus luteum* corresponding to the last menses ten days ago. Maximum pulse 80 and maximum temperature 100.5 on the afternoon of the second day. She progressed nicely and returned home to Arkansas the 19th of December, 1885.

Case 64—BATTEY'S OPERATION.—Married, age 24, no child, three abortions in quick succession. Her general health was excellent up to her marriage, when she missed her menses two months, consulted a female doctor, who passed a sound; abortion followed. She has been treated at the Hot Springs, at Waukesha, and spent nine weeks in a private infirmary at Cincinnati, where the uterus was thoroughly curetted. She entered my infirmary February 1st, 1886. For a year she has spent the time in bed and upon a lounge. She has daily pain in the ovaries, greatly intensified at her periods. These are abnormally frequent and profuse with passage of clots, and occasionally greenish, offensive pus like an abscess had opened. The uterus is anteflexed and tilted to the right side. The ovaries are very tender, especially the left, which is greatly enlarged, and the tube also. She complains of pain about the heart and smothering spells. I do

not find any organic disease of the heart or lungs. I advised her to try uterine treatment for two months longer to see what can be done; she is unwilling to wait on this, and I do not think it can result in more than palliation to her sufferings. She pleads to be rid of her malady.

Operation February 6th, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West and Mrs. Battey. Carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened two inches. Uterus is anteflexed and pushed over towards the right side. The right ovary, adherent by lymph, was detached and removed. The tube being healthy was not disturbed. The left ovary, size of a hen's egg, firmly adherent. It is degenerated into an abscess, which burst in manipulation and discharged into the pelvis dark, grumous pus. A pyo-salpinx, size of the thumb, adherent to the diseased ovary, was removed with it. So thin was the wall of the ovarian abscess a rude preliminary examination might easily have ruptured the sac into the abdominal cavity with fatal consequences. Pelvis was carefully washed out to remove pus and blood, and the wound closed entire. The maximum pulse 130 and maximum temperature 103.2 degrees were observed on the afternoon of the third day. Returned to her home in Arkansas on the 21st of March soundly healed.

Case 65—DOUBLE OVARIOTOMY.—Married, age 43, one child grown and married, no miscarriages. Robust, hearty woman. Nine years ago observed a lump in the left iliac fossa, which has progressed. Until within the past twelve months the progress has been rapid. Menses irregular for a year. Last period, ten days ago, quite free. The lower abdomen is projected forward by a tense fluctuating tumor, irregular in outline, extending across the abdomen and above the umbilicus. The tumor is rather fixed in the pel-

vis, uterus lies in front, not enlarged, not freely movable. She is asthmatic and has slight cough.

Operation March 1, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches. The tumor, covered in front with a net-work of vascular bands coming up from the pelvis, springs from the whole length of the left broad ligament without any distinct pedicle. It was ligated with much difficulty and some loss of blood in consequence of the ligature slipping. It was necessary to allow the small intestines to lie on the abdomen enveloped in warm towels whilst the pedicle was being secured low down in the pelvis. The right ovary was also degenerated into a double dermoid cyst, which was removed. A portion of cyst contents escaped into the abdomen and a small portion of the cyst wall was unavoidably left in the stump. The abdomen was well douched with warm water and a rubber drainage-tube was lodged in the lower angle of the wound. The tumors were both dermoid and contained much steatomatous matter with fragments of bone and numerous teeth, many of them large and well-formed. She was put to bed in good condition with but little nausea and no vomiting. The maximum pulse 120 occurred on the sixth and twelfth days. The maximum temperature 101.5 degrees upon the twelfth day. The drainage-tube and seven sutures were removed on the fourth day. The bowels being well emptied, the six remaining sutures were taken out on the fifth day. In the afternoon she had an attack of violent bilious vomiting, and being a stout, muscular woman, she rent the united wound completely asunder, the omentum protruding. This was pressed back into the abdomen and the sides brought together with four points of deep su-

ture. On the following morning the pulse was 120 and the temperature 99.2 degrees. There was nausea, but the abdomen not distended, she was passing flatus freely. In consequence of this accident the convalescence was unusually protracted. The sutures were removed on the eleventh day. The peritoneum well united, but the outer wall gaping the whole length of the wound, was secured with adhesive straps. She returned home six miles on the 2d of May, pus still discharging.

Case 66—*BATTEY'S OPERATION*.—Single, age 27, suffered ovarian dysmenorrhœa since her girlhood. She has travelled much for her health, been under treatment of many physicians. She entered my infirmary October 20, 1885. There was endometritis, retroflexion, right ovary prolapsed, both ovaries very tender, and with constant ovarian pain. For two years her nervous system has been completely broken down and her mind so much impaired as to give great uneasiness to her family. She spent some months under the care of a reputable specialist. She had local treatment and baths; a pessary was adjusted, but gave so much pain it was discontinued. She received local treatment at my hands for five months with but partial relief.

Operation 8th of March, 1886.—Present, Drs. Adams, of Lexington, Mo.; T. R. Kendall, H. H. Battey and West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened one and a half inches, both ovaries removed. The tubes being healthy were not disturbed; operation completed in twenty minutes. The uterus was decidedly retroflexed; right ovary prolapsed and adherent. Both ovaries contained numerous small cysts. The tunic was thickened and blanched. Maximum pulse 120 and the maximum temperature 103.2 degrees was observed on the afternoon of the third day. She conval-

esced well and returned to her home in Florida on the 20th of May soundly healed.

Case 67—*BATTEY'S OPERATION*.—Single, age 32. Dysmenorrhœa from her girlhood. Bed-ridden for three years. She has been long under medical treatment by specialists. Brought to my infirmary on a litter February 4, 1886. She is much emaciated; digestive apparatus and nervous system thoroughly broken down. Her periods are regular and accompanied by much ovarian pain and nervous disturbance. Uterus small, retroflexed; os healthy; slight leucorrhœa. The ovaries are prolapsed and very tender to pressure. Pulse quick and small.

Operation March 21, 1886.—Present, Drs. H. H. Battey and West, and Mrs. Battey. Ether and a little chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen scarcely an inch and a half. Both ovaries removed with facility and occupied twenty minutes. Tubes healthy and not disturbed. Both ovaries are full of hæmatic cysts; tunic much thickened. Put to bed in good condition without shock. Stomach quiet. The maximum pulse 110 and the maximum temperature 100.5 degrees were observed on the third day. She recovered promptly from the effects of the operation and is still in the infirmary.

Case 68—*DOUBLE OVARIOTOMY*.—Single, age 31. She entered my infirmary the 16th of March, 1886. The abdomen has been enlarging for near two years. Growth rapid in the last six months. Menses irregular, free of pain. She is thin and scrawny, appetite poor; the ovarian cachexia; abdomen is smoothly enlarged, projects forward like a pregnant uterus; fluctuates freely like a large single cyst. The wall moves freely over the tumor. Uterus virginal; lies in

front of the tumor and depressed by it. Menses just appearing.

Operation 30th of March, 1886.—Present, Drs. Adams, of Missouri; H. H. Battey, West, Huzza and Mrs. Battey. Ether, little chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen four inches upon a unilocular cyst of the right ovary, containing thin liquid of almost inky blackness. There being no adhesions, the sac was readily withdrawn; the broad, thin pedicle of good length secured by ligature. Attached by fleshy pedicle to the uterine fundus was a sarcomatous tumor large as a hen's egg; in appearance malignant. Pedicle ligatures and tumor removed. The left ovary, though not greatly enlarged, was distinctly cystic, and several cysts were ranged along the fallopian tube. The ovary and tube were removed. Weight of tumor and contents, twenty-two pounds. No cystic liquid having entered the peritoneum, the abdomen was closed without sponging. Put to bed in good condition without shock. On the fourth day the pulse was 84 and the temperature 103 degrees. Pulse reached 100 only upon the fifth day. She convalesced promptly, but being a little timid, she remained in the infirmary until the 20th of May, when she returned to Savannah well.

Case 69—BATTEY'S OPERATION.—Married eleven years, age 34, four children, last six years ago, premature. Broken down in health since her third labor. Menses regular, last five to six days, scanty with much ovarian pain. Pain in the right ovary has been constant for four years. Digestive apparatus broken down, nervous system shattered. Entered my infirmary April 13th, 1886. The uterus is in position and seems healthy; not at all tender and no discharge. Both ovaries exquisitely tender to the touch and the pain continues

for hours after each examination. The right ovary is prolapsed, enlarged; the left can't be well defined.

Operation April 17th, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened an inch and a half; removed both ovaries and the right tube. No adhesions. The right ovary contained one large hæmatic cyst and two smaller ones. Tunic blanched, thickened and corrugated. The right tube had several cysts attached to it; was otherwise healthy. The left ovary was very much shrunken, the tunic thickened and corrugated. Put to bed in good condition. Had nausea, but no vomiting. Required no opiate. She convalesced promptly. The maximum pulse 90 and maximum temperature 101 degrees occurred on the first day. She returned home to Tennessee on the 16th of May soundly healed.

Case 70—BATTEY'S OPERATION.—Married twelve years, age 33, five children, youngest six, no abortions. Bad health since last labor. She complained of more or less constant ovarian pain, aggravated at the periods. Has been confined to her bed for a month past, and has frequently such attacks. She is a great and constant sufferer and prays for relief. She entered my infirmary April 26th, 1886, and was examined under chloroform. The ovaries are exceedingly tender to the touch despite the chloroform. The os is slightly notched at two or three points and the uterus retroflexed. The right ovary is prolapsed and enlarged, the left could not be well defined.

Operation April 30th, 1886.—Present, Drs. W. W. Fraser, of South Carolina; H. H. Battey, West, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Small incision in the *linea alba*.

Ovaries not adherent and removed with facility, together with the right tube. The right ovary contained one hæmatic cyst, size of a wren's egg, and three or four smaller ones. The tube had several pellucid cysts along its border and two small cretaceous nodules. Its canal appeared healthy. The left ovary was shrunken and corrugated, the tunic thick and brawny like morocco leather. The left tube being healthy was not disturbed. She bore the operation well; was put to bed in good condition in thirty minutes. Pulse ran down on the third day to 56, maximum temperature 101.2 degrees occurred on the fourth day. She returned home to Alabama on the 10th of June soundly healed.

