A Series of Interesting Cases in the Service of Dr. Horace Tracy Hanks at the Woman's Hospital.

BY

JOHN H. RISHMILLER, M. D.,

House Surgeon to the Woman's Hospital in the State of New York.

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The following unusually interesting cases have come under my immediate observation while connected with the Woman's Hospital and I trust that they may be of some value as a contribution to the literature of surgical gynæcology. Only a few typical cases in plastic work have been inserted. These will give, however, a lucid idea of the characteristic preparation, *modus operandi* and the method of the subsequent treatment in this very important department of work which the Woman's Hospital has always taken a just pride in promulgating. All patients on entering the hospital are subjected to daily systematic treatment by the house surgeon unless contra-indicated.

Preparation for Cœliotomy.—For preparation for abdominal surgery besides general building up of the system—tonics and stimulants if needed—the patient, thirty-six hours before the time appointed for the operation, is given a hot bath with plenty of soap and again the same twelve hours prior to the operation. After the second bath the external genitals are carefully shaved and a compress saturated with soapsuds is applied over the whole abdominal wall and the mons veneris. This is changed to a bichloride (1–2,000) compress five hours before the operation. The bowels, from admission, are regulated with cholagogue and saline purgatives, in order to move them about twice daily. If the patient is to be prepared for the removal of a large neoplasm, a high enema of soapsuds is also ordered daily in the majority of cases as the pressure of the tumor prevents free defecation. Twelve hours prior to the operation the patient receives by mouth an ounce of saturated solution of magnesium sulphate. This is aided by two high rectal soapsuds enemata four and two hours respectively before the operation, using one quart for each enema. The patient is given no solid food for twelve hours previous to the operation but, half an hour before starting the anæsthetic, an ounce

of brandy is administered. The nurse gives a vaginal bichloride (1–3,000) douche two hours before the operation and another immediately before the patient is taken to the anæsthetizing room. Before the anæsthetic is administered the heart, lungs and kidneys are carefully examined and their condition tested. If the kidneys or the lungs are diseased chloroform is used instead of ether and, if either organ is decidedly diseased, the anæsthetic is given with the greatest care. As soon as the patient is half way under the anæsthetic influence she is catheterized, moved to the operating room and placed on the operating table. The vagina is then douched with warm water and scrubbed with the Hanks' formula of green soap—green soap two parts, alcohol one part and glycerin one part—followed up by a bichloride (1–3,000) irrigation. Next the bichloride compress is removed and the abdominal wall, together with the mons veneris, is thoroughly scrubbed, using a brush for that purpose with sterilized warm water and the green-soap preparation. Then the parts are washed off successively with ether, alcohol and bichloride (1–3,000). Sterilized towels are then placed around the field of operation and the patient is now ready for operative procedure.

Cœlio-hysterectomies for Uterine Neoplasm and Diseased Tubes and Ovaries.

Case I. *Myo-fibroma Uteri with Diseased Annexa. Operation. Recovery.*—Mrs. C., aged forty-two years, married thirteen years, one child eleven years ago; has always had dysmenorrhœa until last June, when amenorrhœa began, lasting three months, and followed by metrorrhagia. Catamenia have always been profuse with clots. Since birth of child she has had constant pain in the lumbar region, back of neck and head. Four years ago she had an operation for lacerated cervix, but her symptoms were not ameliorated. Patient was profoundly anæmic and debilitated with œdema of the lower extremities. She became fatigued and had dyspnœa on the slightest exertion.

January 25th.—Patient etherized.

Physical Examination—Diagnosis: possibly fibro-sarcoma. The uterine canal was six inches deep, and the cervical canal was divulsed and the uterine cavity curetted, removing considerable *débris*. The uterine cavity was irrigated to check excessive hæmorrhage with hot bichloride (1–5,000) solution and tamponed with iodoform gauze. Microscopic examination of the result of the curetting showed chronic endometritis.

February 1st.—Dr. Hanks, assisted by Drs. Coe and Rishmiller.

Patient etherized and placed in Trendelenburg's position. Incision, made between umbilicus and symphysis pubis, was about five inches. Both ovaries were found hypertrophied and diseased. The uterine tumor was soft, and involved the fundus. Both tubes and ovaries were first removed. The uterine arteries then ligated through the broad ligaments and the entire uterus extirpated. The pelvic cavity was thoroughly irrigated—fluid escaping *per vaginam*. The upper part of the vagina was tamponed with iodoform gauze and the peritonæum brought together with sutures, closing the peritoneal cavity below. Abdominal wound closed with silkworm gut and a few superficial catgut sutures. Wet bichloride (1–3,000) dressing was applied, and the patient returned to bed in good condition. Time forty-five minutes. A nutritive enema was given every six hours, for the first three days, of egg j; brandy ℥ j; beef juice ℥ ss.; water ℥ j; sod. chlorid gr. xx. A high enema was also given on the third day of glycerin ℥ j; ol. olivæ ℥ ij; saturated sol. mag. sulph. ℥ ij; water to make one pint; resulting in three loose defecations. The gauze was removed from the vagina at the end of the fourth day and a creolin douche given (b. i. d. ℥ j to Oij). Sutures removed on tenth day and there was perfect primary union. Patient made a satisfactory recovery and was discharged cured.

Pathologist's Report.—The first ovary has been reduced to a pear-shaped cyst, the external surface of which is smooth. The cyst measures 4.5 × 6 ctms. The tube is enlarged and twisted. The second ovary shows chronic ovaritis, small follicular cysts and corpora fibrosa. Tube shows chronic salpingitis. The uterus presents an oval-shaped tumor measuring 5 × 4 ctms.—myo-fibroma.

Case II. *Large Uterine Fibroid with Diseased Appendages. Recovery.*—Mrs. C., aged forty-eight years. Admitted to the hospital April 25th. Married twenty-eight years, three children, the oldest twenty-two years and the youngest thirteen years. All three confinements were normal. She had one miscarriage twelve years ago at the third month. She first menstruated at the age of fifteen and her periods lasted seven days without dysmenorrhœa, returning regularly every twenty-eighth day. Four years ago she began to have metrorrhagia, the flow being light in color. The flow has steadily increased until now her vital powers have almost drained away. She is exceedingly anæmic, possesses very little strength and walks by the aid of a nurse.

An examination revealed a fibroma asymmetrically enlarging the uterus and filling the pelvis and the lower abdomen. The cervix pointed toward the pubis pushing the bladder entirely out of the

pelvic into the abdominal cavity, and the sound passed six inches into the uterine canal. The uterine cavity was irrigated with a weak iodine solution and the vagina firmly tamponed—compressing the pelvic vessels. The foot of the bed was elevated fourteen inches which checked the metrorrhagia immediately. Her diet was increased, iron and stimulants were administered as much as her weak stomach could bear without rebellion. Three weeks of judicious and systematic treatment restored a fair amount of strength and as a return of the metrorrhagia was feared, the operation was performed without delay.

May 17th.—Dr. Hanks, assisted by Drs. Coe and Rishmiller. Median abdominal incision of six inches. The tumor was found bound down by firm adhesions in the pelvic cavity especially over the sacrum. After prolonged manipulation the adhesions were broken up and the tumor gradually liberated from the pelvis. The bladder was adherent partly to the upper and entirely to the anterior aspect of the neoplasm but was dissected off with a blunt instrument without injury. The broad ligaments were ligated with catgut including the ovarian and uterine arteries, and the uterus removed *in toto* together with a small ovarian cystoma on the left side. The abdominal cavity was flushed with sterilized warm (110° F.) water. The vagina was partly closed with fine catgut sutures and the raw surface within the pelvic cavity was tamponed with a continuous strip of iodoform-gauze one end of which was carried through the vaginal opening—establishing drainage. The peritoneal edges were united with a fine running catgut suture—thus closing the pelvic opening entirely. Abdominal cavity closed with silkworm-gut sutures. Time seventy minutes. Patient received a hot stimulating enema during the operation and one every three hours for the first twenty-four hours after the operation. The temperature remained normal and she made a very satisfactory recovery. The sutures were removed on the tenth day and the patient was out of bed three weeks after the operation.

Pathologist's Report.—The ovary shows an ovoid-shaped cyst, surface covered with adhesions and measures fifty-two millimetres long by thirty-five millimetres wide. The tube is enlarged being eleven millimetres in diameter and the fimbriated end is lost in the wall of the cyst. Long section shows the lumen of the tube dilated, fimbriated end occluded and a large cyst of the ovary filled with blood—with small cysts in the wall. Cyst wall shows remains of ovarian tissue containing corpora fibrosa and the contained blood clot is beginning to organize. The tube shows suppurating salpingitis. Uterus measures sixteen centimetres long and eleven centimetres in

antero-posterior direction. Irregular nodular fibroid is situated in the posterior wall which has become so thin that it has ruptured (in removal ?). Fibroid measures fourteen by ten centimetres.

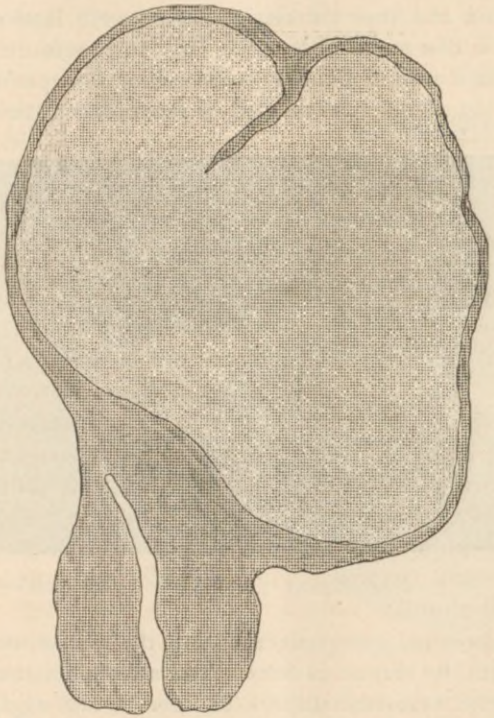

FIG. 1.—Sagittal section of uterus, showing fibroma in posterior wall.

CASE III. *Enormous Fibro-myoma Uteri with Diseased Annexa.*—Miss J., aged forty-three and single. Menstruation profuse lasting six to seven days returning every twenty-eighth day. She complained of an enlargement of her abdomen with consequent and unbearable pressure symptoms. The patient has noticed a gradual increase in size of the abdomen for six years. An examination revealed a huge fibroma of the uterus filling the pelvic cavity and extending two inches above the umbilicus. The sound passed seven inches anteriorly into the uterine canal.

May 24th.—Dr. Hanks assisted by Drs. Coe and Rishmiller. Ether. A median abdominal incision was made extending from one inch above the symphysis pubis to two inches above the umbilicus and the tumor was seized with volsella forceps and hooks and by an oscillat-

ing traction drawn through the abdominal incision. The numerous firm adhesions were ligated and severed. The broad ligaments, which by reason of the magnitude of the tumor were extensively developed, were ligated in sections and severed. The bladder was dissected from the tumor and then the uterine vessels were ligated with catgut and divided. The tumor obstructed further procedure so a rubber cord was passed around the base—controlling hæmorrhage—and the fibroid with the uterus was removed *en masse* above the cervix. The

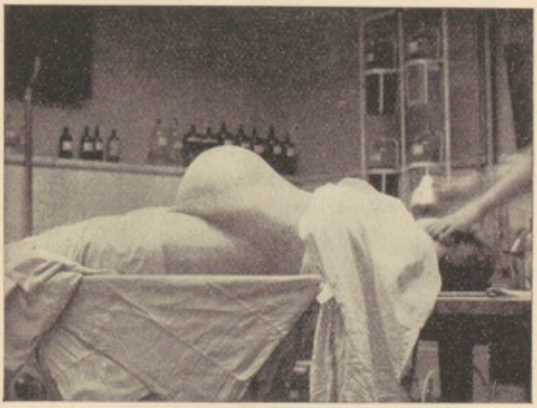

FIG. 2.—Fibro-myoma of uterus just before removal.

cervix was afterward removed excepting the portio which was then cauterized with the thermo-cautery. The abdominal cavity was twice flushed out with sterilized water. The cervix and vagina were tamponed with gauze and the peritoneal surfaces were brought together and sutured over the gauze and stump, thus allowing free drainage and leaving the stump extra-peritoneal. Abdominal wound closed. Time one hour and twenty minutes. The patient received enemata during the operation and was put to bed in a poor condition. The removal of this enormous neoplasm was followed by an unusually profound shock from which the patient never sufficiently rallied, notwithstanding the application of hot-water bags and the administration of hot stimulating enemata every three hours. An opiate being indicated, she received hypodermically sulph. morph. gr. 0.25 eight hours after the operation. The temperature rose immediately after the operation and she died thirty-six hours afterward, the thermometer indicating 108.5° F. The renal secretion for the thirty-six hours amounted to seven ounces. The autopsy revealed the peritoneal cavity in as healthy and aseptic a state as before the fibroid was re-

moved. Both ureters were pervious and uninjured through their entire course, though great anxiety was entertained that one of them had been ligated on account of the deficiency in the urinary secretion. The kidneys were small and extremely congested, showing chronic nephritis. Direct cause of death was shock.

Pathologist's Report.—Uterus measures 27 ctms. in length and 23 ctms. in antero-posterior direction. The posterior wall is occupied by an oval-shaped fibroid 25 × 20.5 ctms. The uterine tumor is a fibro-myoma with numerous small areas of necrosis, some of which have become converted into small cysts. "*a*." Ovary and Tube.—The ovary measures 7.5 ctms. in length, 3 ctms. in width and 2 ctms. in thickness. Surface slightly corrugated. The ovary shows chronic ovaritis, follicular cysts with myxomatous degeneration of entire medullary portion. The tube measures 8.5 ctms. long and 0.5 ctm. in diameter and shows chronic salpingitis. "*b*." Ovary and Tube.—The ovary is 7.5 ctms. long, 2 ctms. wide and 6 mm. thick and shows chronic ovaritis, follicular cysts and corpora fibrosa. The tube is 8 mm. in diameter, twisted and shows chronic salpingitis.

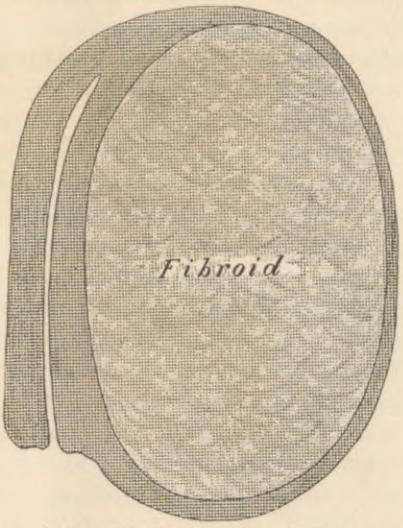

FIG. 3.—Sagittal section of uterus.

CASE IV. *Large Pedunculated Fibroma Uteri with Cystic Ovaries.*—Miss M., aged forty-four. Catamenia have always been regular until fourteen years ago when metrorrhagia developed and the flow has since become excessive. The quantity constantly increased and when admitted to the hospital she was afflicted with a continuous flow. Patient had to void urine frequently and had suffered for years with constipation and imperfect evacuation of the rectum due respectively to pressure of the tumor on the bladder and colon. Her abdomen had gradually enlarged and interfered seriously with free respiration. Patient has had intense pain in the back and pelvis with occasional numbness in both thighs.

January 25th.—Ether examination disclosed an enlargement of the abdomen due to a fibrous neoplasm intimately connected with the uterus and extending three inches above the umbilicus.

February 1st.—Dr. Hanks. Patient etherized and in Trendelenburg's position. Median incision of seven inches revealed a pedunculated, hard and nodular fibroma occupying the whole pelvic cavity and the abdominal cavity below the umbilicus, crowding the intestines against the diaphragm. The tumor was seized with hooks and volsella forceps and pulled through the abdominal incision. The bladder was dissected from the anterior wall of the uterine neoplasm with a blunt instrument without injury. The broad ligaments and the uterine arteries were ligated and the parts divided. The whole tumor with the uterus and appendages was removed *en masse* with the exception of a mere shell of the cervix which was then thoroughly cauterized with the thermo-cautery. A strip of gauze was carried through the cervical canal into the vagina and the rest tamponed over the stump. The peritoneal edges were united over the gauze with catgut—thus leaving the gauze and stump extra-peritoneal and establishing vaginal drainage. The abdominal wound was closed *in toto* and a dry dressing applied. Time of operation one hour. The severity of the operation produced the expected profound shock from which she rallied in a very satisfactory manner under the application of hot-water bags and the administration of hot stimulating enemata. The vaginal gauze was gradually removed, taking away the last piece on the sixth day. The temperature remained normal after the operation and the sutures were removed on the tenth day. Patient was out of bed on the eighteenth day and was discharged cured on the twentieth.

Pathologist's Report.—The tumor and uterus weigh 3,150 gms. The uterus measures 17 cms. in length and 18 cms. across the cornua. Both attached ovaries are cystic. Attached to the fundus of the uterus by a pedicle 2.5 cms. in diameter is an oval fibroid measuring 19 cms. in length, 10 cms. in width and 7 cms. in thickness Section shows the uterine wall filled with a mass of fibroids from 0.5 to 9 cms. in diameter. Many of the smaller ones project into the uterine cavity which is enlarged. The pedicle of the fibroid attached to the fundus is composed of dense fibrous tissue and large, numerous blood-vessels.

CASE V. *Fœtal Bones in Douglas' Cul-de-sac from an Old Extra-uterine Gestation complicating Fibroma Uteri with Hydrosalpinx.*—Mrs. G., aged forty-seven, admitted March 20, 1893. Married twenty-six years, one child twenty-five years ago. She was very doubtful whether she had a miscarriage twenty-three years ago or not, but had amenorrhœa for three months, followed by metrorrhagia, and was confined to her bed at the time for four months. The

patient came to the hospital and sought relief from the profuse metrorrhagia which had harassed her for several months previously. She had always menstruated with regularity. She had excessive leucorrhœa with offensive odor and a constant, dragging pain in the bladder. Almost any disturbance was liable to induce an uncontrollable hæmorrhage. She was very nervous and of an irritable disposition ; digestion impaired and bowels irregular. The patient was emaciated, anæmic and weak.

March 28th.—Ether examination. The uterus was enlarged to about the size of a four and a half months' pregnancy. The cervical canal was dilated and the uterine sound passed five inches through a tortuous canal. The uterine cavity was curetted, and tamponed with iodoform gauze, and the result of the curetting was sent to Dr. George C. Freeborn who reported it as being "Chronic Endometritis."

May 3d.—Dr. Hanks assisted by Dr. Coe and house staff. The patient had a trace of albumin in her renal secretion ; therefore chloroform was administered during the early part of the operation and ether later. A median incision was made, five inches long, revealing omental adhesions to the abdominal wall which were ligated and severed. The right annexa were prolapsed and firmly adherent to the recto-vaginal pouch, requiring skillful manipulation for their separation. While breaking up the right ovarian and tubal adhesions, fœtal bones were found in Douglas' *cul-de-sac*, imbedded in firmly organized exudate. The left appendages were adherent and the tube was distended with a watery fluid. The tubes and ovaries were ablated, facilitating the subsequent procedure, and the broad ligaments and the structures including the uterine vessels were ligated and cut in succession. The uterus was amputated, leaving a mere shell of cervix which was divulsed and thoroughly cauterized with the thermo-cautery. The abdominal cavity was thoroughly flushed out with warm (112° F.) sterilized water. The end of a long strip of iodoform gauze was passed through the cervical canal into the vagina and the rest tamponed immediately above the cervical stump. The peritoneal surfaces were brought over the gauze and sutured into apposition by fine, continuous catgut, thus closing the peritoneal cavity below while establishing free pelvic drainage *via* the cervix. The abdominal wound was closed in the usual manner with silkworm-gut sutures. Time, thirty minutes. The patient received hypodermic injections of brandy and camphorated oil during the progress of the operation. Considering the patient's unfavorable condition she held her own in a remarkable degree throughout the operation and rallied well from the shock. Six to eight inches of the gauze in the cervix

were daily removed until the final strip was withdrawn on the seventh day. Mild antiseptic douches were ordered on the fourth day. The bowels were moved on the second day by half an ounce of turpentine and soapsuds enough to make one pint and a half. She was a very phlegmatic individual, and notwithstanding zealous nursing and alteration of position bedsores developed on the slightest pressure, hindering her convalescence to a marked degree. The abdominal sutures were removed on the twelfth day, and the patient was discharged, cured, June 24th, with entire relief from her former ailment.

Pathologist's Report.—Fibroma uteri. Uterine walls in several localities reduced to an average thickness of one millimetre.

Case VI. *Uncontrollable Uterine Hæmorrhages Five Years after Double Salpingo-öophorectomy in a Case of Myo-fibroma Uteri.*—Mrs. H., aged forty. Admitted February 17, 1893; married sixteen years but no children. She had one miscarriage fifteen years ago at the third month, which was followed by pelvic cellulitis, and she dates her ailment from that time on. She had almost constant menorrhagia and metrorrhagia lasting eight to thirty days. She had some pain during her menstruation, commencing on the second day in the lower part of the abdomen, of a sharp and bearing-down character. Her chief complaints were a constant excruciating pain across the lower part of the abdomen and back with excessive nervousness and unbearable cephalalgia. Both ovaries and a tumor were removed at one of the city hospitals in April, 1888.

February 24th.—Ether examination. A slight hernia was noticed at the seat of the previous abdominal wound. The uterus was found asymmetrically enlarged and lying against the abdominal wall. The sound passed four inches into the uterine canal and the diagnosis arrived at was a sessile fibroma on the anterior wall near the left horn of the uterus. The uterine cavity was curetted and tamponed with iodoform gauze.

March 8th.—Dr. Hanks. Patient etherized and placed in Trendelenburg's position. A median abdominal incision was made from the symphysis pubis to the umbilicus. Both the stumps left by the operation five years ago were observed. The omental adhesion to the uterus was ligated and severed. The uterus was universally adherent to the surrounding structures; these adhesions were torn and divided, being ligated when necessary. Ligatures were passed around the structures including the uterine vessels, which were then ligated and the tissues cut, thus removing the uterus *in toto*. The abdominal cavity was flushed out twice with sterilized warm (112° F.) water—

the patient was shifted into the horizontal position for this purpose. The cut vaginal surfaces were sutured into apposition by a fine running catgut and, next, the incised peritoneal surfaces were drawn down to the vaginal parts and sutured. By this manœuvre the vaginal fornices were entirely closed and all wounded surfaces were simultaneously covered with peritonæum. The integument was dissected from the hernial seat and a strip about an inch and a half wide by two inches and a half long was excised. The abdominal wound was closed with silkworm-gut sutures. The patient rallied well from the shock, which was not severer than from an ordinary trachelorrhaphy, and her convalescence was surprisingly satisfactory. Her bowels were moved on the second day. She had a slight vaginal discharge and creolin douches (℥ ss. to Oij) were ordered on the fourth day. The abdominal sutures were removed on the tenth day when the wound exhibited perfect primary union. She was up and about three weeks after the operation. Discharged, cured.

April 8th, 1894.—She was seen thirteen months after the operation and her healthful appearance bore out the statement that "she never had felt better in her life."

Pathologist's Report.—Submucous myo-fibroma.

Case VII. *Cœlio-hysterectomy for Diseased Tubes and Ovaries, Tubo-ovarian Cystoma and Pyosalpinx. Operation. Recovery.*—Mrs. M., aged thirty-two, married twelve years, two children ; the oldest ten years ago, the last stillborn two years ago, the labor lasting six hours. After the birth of first child she was in a hospital in Ireland with puerperal fever. Her illness dates back two years during which time she has had pain in the suprapubic and sacral regions, both groins and down the thighs.

March 8th.—Patient under ether. Laceration and induration of cervix found. Uterus enlarged hard and retroverted. A movable tumor the size of a hen's egg on the left side. Enlarged and diseased tube on the right side. The cervical canal was divulsed and the uterine cavity was curetted. Microscopic examination of the result of the curetting: Adenomatous hyperplasia of the uterine mucous membrane with suspicious cell proliferation in the stroma. In consultation Dr. Cleveland found the same conditions and advised cœliotomy.

March 22d.—Dr. Coe. Patient etherized and placed in Trendelenburg's position. Median incision of about five inches. Pendulous abdominal wall from excessive adipose tissue. A tubo-ovarian cystoma the size of an orange was removed from the left side and a pyosalpinx from the right, which ruptured during removal. The

uterus was enlarged. Hysterectomy was decided upon on account of the large raw surface and the difficulty of drainage. The uterine arteries being deep in the pelvis, three silk ligatures were required for each side. The bladder was dissected off with facility and there was a trivial amount of hæmorrhage. The uterus was wholly extirpated, gauze drainage being established through the vagina. The abdominal cavity was closed with silkworm-gut sutures. Wet bichloride (1–3,000) dressing was applied. Time, sixty-five minutes. Previous to closing the wound the nurse accidentally handed to the assistant a sponge taken directly from a strong solution of carbolic acid (1–20), so that the edges of the wound were cauterized. A mural abscess was therefore expected, especially as the patient was unusually fat. The patient was returned from the operating room in a weak condition, but rallied from shock under the use of hot enemata and hypodermic stimulation. Sulph. atroph. gr. $^1/_{120}$, sulph. strych. gr. $^1/_{40}$, and sulph. morph. gr. $^1/_4$, were ordered *pro re nata*. On the second day several inches of gauze were removed from the vagina and this was continued daily to encourage drainage ; the last strip being removed on the tenth day. The temperature ranged from 98.8° to 103° F. during the first five days. On the fifth day a discharge noticed from the abdominal wound which was then dressed with hot carbolic-acid compresses every four hours. On the sixth day all the superficial and two deep sutures were removed, allowing free vent to a quantity of pus. A vaginal douche (creolin 1–400) was given daily. On the eighth day all the sutures were removed and the wound was laid freely open to heal by granulation. It was irrigated twice daily with bichloride solution (1–3,000) and pure peroxide of hydrogen and was dressed with balsam of Peru.

April 29th.—The abdominal wound is entirely healed. There is a small cicatricial plug on the vaginal roof. The patient is walking about and is entirely free from pain.

Pathologist's Report.—"A." Ovary and Tube.—The fimbriated end of the tube is occluded, rounded off, lumen dilated and filled with pus. Atropic form of ovaritis ; few small cysts and numerous corpora fibrosa. "B." Ovary and Tube.—The tube is twisted and the fimbriated end dilated into a thin-walled cyst which is adherent to a cyst of the ovary. Section shows a cyst of the tube communicating with a cyst of the ovary. Chronic ovaritis and follicular cysts. Uterus—Shows adenomatous hyperplasia of uterine mucous membrane.

Salpingo-oöphorectomies for Cystomata of the Uterine Annexa.

CASE VIII. *Large Multilocular Cyst. Operation. Recovery.*—Mrs. D., aged sixty-seven years; married twenty-five years, but never pregnant. Menopause seventeen years ago. Three years ago had influenza and has since menstruated at fairly regular intervals, ceasing five months ago. These menstrual periods being similar to previous menstruations excepting less pain. Complains of weakness and pain in lower part of abdomen on exertion for last ten years but gave it slight consideration until six months ago when abdomen commenced to enlarge very rapidly and has continued to do so since. The patient lost weight during last six months.

Physical Examination.—There is emaciation, anæmia, sallow skin, painful defecation, and dyspnœa. Hindered locomotion due to pressure of neoplasm. Painful pressure symptoms and increased interfered respiration due to intraperitoneal pressure. Lower abdominal wall and inferior extremities together with labia majora present œdematous infiltration. Palpation and percussion of abdomen demonstrated hydroperitonæum (slight) with multilocular cystoma extending beyond umbilicus and filling lower abdomen and whole pelvis. Vaginal examination negative and malignancy doubtful. Atheromatous degeneration and aortic regurgitation giving water-hammer pulse very distinctly. Urine: Turbid, acid reaction, specific gravity 1.020, albumin trace, few pus cells, and bladder epithelium. Dr. Cleveland's opinion in consultation coincided in favor of immediate cœliotomy.

April 19th.—Dr. Hanks, assisted by Dr. Coe and Dr. Rishmiller, made a median abdominal incision of six inches, disclosing neoplasm. Patient turned on left side permitting escapement of ascitic fluid. Trocar and cannula thrust into cyst for evacuation but contents found too thick for tapping. Cystic opening seized with large forceps, enlarged and closely pulled to abdominal wound preventing contents escaping into peritoneal cavity. Organized lymph and papillomatous material evacuated by hand and the mass was gradually drawn through the abdominal wound. One of the compartments contained an old blood-clot of considerable size. Intestinal and omental adhesions were very strong. The patient made a good recovery.

CASE IX. *Enormous Multilocular Cystoma and Dermoid Cyst. Recovery.*—Mrs. R., aged fifty years; admitted June 9th. Married and the mother of six children; oldest thirty years and youngest sixteen years old. Her first confinement had been difficult and instrumental. She had two miscarriages in early married life. Reached menopause

over two years ago. A year ago she first observed a gradual enlargement of her abdomen, while since last September the increase has been more rapid. Three months ago her family physician drew off twelve quarts of fluid but her abdomen rapidly refilled.

On examination an enormous multilocular cyst was found and the patient had all the symptoms of intraperitoneal pressure.

June 15th.—Paracentesis was performed fourteen quarts of dark-colored fluid being withdrawn. This procedure was necessary as an unusual number of emergency cœliotomies prevented an immediate section and the patient presented dangerous pressure symptoms. Thirty-six hours after paracentesis the temperature commenced rising and reached 102° F. so that immediate interference was determined upon.

17th.—Dr. Hanks assisted by Dr. Coe and Dr. Rishmiller, the patient being under ether, made a median abdominal incision of five inches. The patient was turned on the side and the larger cyst grasped with strong forceps, then a trocar was thrust into it and about three gallons of fluid were evacuated. The entire peritoneal cavity presented chronic inflammatory thickening and the numerous firm intestinal and omental adhesions were gently broken up—ligated with catgut and divided when necessary. The sac was drawn through the incision and the broad pedicle which sprang from the right horn of the uterus was ligated in sections with catgut and the tumor removed. Left ovary was enlarged to the size of a hen's egg and presented areas of inflammatory hardness so that it was also ablated. Both pedicles were cauterized and the peritoneal cavity was thoroughly irrigated with warm sterilized water (112° F.). The lower part of the abdominal wound *above* the bladder and peritonæum (not cavity) was drained by a narrow strip of iodoform gauze which was gradually removed. The abdominal wound was closed with silkworm-gut sutures and a moist bichloride dressing was applied. Time forty-five minutes. Counting the fluid (twenty-eight pounds) which was removed two days previous to the operation and the fluid removed during the operation (about twenty-eight pounds) together with the weight of the cystic sac the whole tumor weighed originally about sixty pounds. The patient made an astonishingly rapid recovery without the slightest complication. All the sutures were removed on the ninth day and the patient was discharged cured three weeks after the operation.

Pathologist's Report.—Very large multilocular cyst. The cysts are filled with different fluids while the walls are studded with smaller cysts. The small ovarian tumor from the left side is a dermoid cyst containing hair and bones.

Case X. *Ovarian Cystoma. Cœliotomy. Uneventful Recovery.*—Mrs. F., aged twenty-eight; married eight years; one child, two and a half years old. Dysmenorrhœa with general weakness and malaise. Catamenia profuse, lasting six days, recurring every twenty-eighth day. Leucorrhœa for eight years brownish color, fœtid and increased after menstruation. Constant pain in sacral region and right groin of a dull, aching, bearing-down character, sometimes sharp and shooting. Anorexia, nausea, constipation, excessively nervous, insomnia, and constant frontal and occipital headaches.

March 8th.—Patient etherized. Left ovary enlarged and prolapsed. Cervix divulsed and uterine cavity curetted and irrigated with bichloride (1–10,000). Cavity of uterus tamponed with iodoform gauze, which was removed on third day.

22d.—Dr. Hanks. Patient etherized. Abdominal incision of three inches. Right tube and ovary normal. Ovarian cystoma found on left side, which was removed, using catgut ligatures. Abdominal wound closed, utilizing silkworm gut and wet bichloride dressing applied. Time fifteen minutes. Sutures removed on ninth day. Temperature constantly remained below 100° F. Patient made an uneventful recovery. Discharged cured.

Pathologist's Report.—The cyst is ovarian and the tube shows chronic salpingitis.

Case XI. *Cystic Ovaritis and Salpingitis. Operation. Recovery.*—Mrs. S., aged thirty; married five and a half years; two children, oldest three and a half years and youngest one and a half year. Both confinements were hard and tedious, and delivery effected by instruments. She had one miscarriage four years ago at third month, and puerperal fever during last confinement. Catamenia lasts seven days, returning irregularly in from twenty-one to twenty-eight days with pain after menstruation. She complains since birth of first child of a dragging bearing-down pain in the right pelvic region which has got worse since birth of second child. Pain is increased during defecation.

April 13th.—Patient was subjected to an ether examination and a mass was detected in the recto-vaginal pouch, size of a goose egg, involving probably the right ovary.

26th.—Dr. Hanks made a median abdominal incision of four inches long and a thin-walled parovarian cystoma, size of an orange, was found on the right side which was removed including tube and ovary. Catgut No. 4 was used for the pedicle ligature and the stump was cauterized. Ovary and tube on left side normal. Abdominal wound closed and aristol dressing applied. Time twenty minutes. Tem-

perature continually remained below 100° F. Sutures were removed on ninth day with perfect coaptation and primary union.

May 17th.—Patient is walking about and free from the distressing feeling in the right pelvic region.

Pathologist's Report.—The ovary is oval in shape and surface covered with adhesions. Measures forty millimetres long, nineteen millimetres wide, and twenty millimetres thick. Between the ovary and tube there is a spherical-shaped cyst twenty-five millimetres in diameter adherent to both organs. Tube is slightly enlarged and winds around the above-mentioned cyst. Starting from the fimbriated end of the tube and the external end of the ovary there is a spherical-shaped, thin-walled cyst, forty-one millimetres in diameter. Ovary shows chronic ovaritis, follicular cysts, large and numerous corpora fibrosa. The tube shows chronic salpingitis and inflammatory cysts.

CASE XII. *Hæmorrhage into an Ovarian Cystoma. Operation. Recovery.*—Mrs. McA., aged thirty-six; married fourteen years; one child five years old. Labor tedious. Dysmenorrhœa, otherwise menstruation normal. For the past eight months she has had excessive leucorrhœa with rectal tenesmus. The patient has complained of pain in the suprapubic region and right groin with a constant bearing-down sensation. She is very fidgety and irritable, and has had anorexia with occasional vomiting and constipation.

An examination disclosed a semi-fluid immovable tumor posterior to and at the right of the uterus. Dr. Thomas Addis Emmet saw the patient in consultation and agreed with the diagnosis.

June 21st.—Dr. Hanks made an incision in the median line four inches long. The urine contained a trace of albumin therefore chloroform anæsthesia was employed. The mass about the size of a child's head was situated at the right of the uterus and in Douglas' pouch evidently originating from the right ovary. It was firmly adherent to the uterus and pressed into the pelvis, requiring considerable manipulation for breaking up the adhesions. The tumor was found to be cystic, and it was ruptured while being enucleated—coagulated blood escaping. The sac was ligated with catgut close to the uterus and removed. The raw peritoneal surfaces left after breaking up the adhesions were united with a fine running catgut suture. The left ovary was generally cirrhotic and nodulated so that it was also removed. Both stumps were cauterized with the thermo-cautery and the peritoneal cavity was flushed out twice with boiled water. Abdominal wound closed with silkworm-gut sutures and dry dressing applied. Time forty minutes. Patient had no shock and made an unusually satisfactory convalescence. The abdominal sutures were removed on

the tenth day and the patient was discharged cured three weeks after the operation.

Pathologist's Report.—Ovarian cyst in which there are the remains of a hæmorrhage of long standing. The left ovary shows chronic ovaritis.

Case XIII. *Cyst of the Broad Ligament. Recovery.*—Mrs. N., aged thirty-one ; married fourteen years ; two children, first twelve years and last ten years ago. The last labor was slow and instrumental. Her menstrual periods have always been normal until six months ago when dysmenorrhœa and metrorrhagia developed. Bowels are constipated and she has occasional temporal headaches. For the past year she has suffered with constant pain in her left side of a sharp and shooting character, radiating down left thigh.

February 23d.—The uterus was found enlarged and pushed to the right side of pelvis by a tumor of the left ovary or broad ligament.

25th.—Dr. B. Emmet saw the patient in consultation and found the left ovary prolapsed and cystic and agreed as regards the indication for cœliotomy.

26th.—Patient etherized and in Trendelenburg's position. Dr. Coe made a median abdominal incision of three and a half inches which was afterward enlarged with scissors. A broad ligament cyst was found on the left side the pedicle of which was ligated with silk and the tumor, including tube and ovary, removed. The ovary on the right side was found to be enlarged and indurated and the tube occluded so these were also removed. After fully ascertaining with the patient in the horizontal position that hæmorrhage was checked, the abdominal wound was closed with silkworm-gut sutures and was dressed with aristol. The time of the operation was thirty-five minutes.

March 10th.—When the abdominal sutures were removed a stitch abscess was observed. This was then dressed with hot carbolic-acid compresses every six hours and healed quickly under antiseptic dressings.

19th.—Patient is sitting up in bed and making a good convalescence.

Pathologist's Report.—"*a.*" Ovary and Tube.—The ovary is small and corrugated. The tube is twisted and enlarged. Growing from the meso-salpinx and extending outward, is a thin-walled spherical-shaped cyst measuring 6.5 ctm. in diameter being a cystoma of the parovarium. "*b.*" Ovary and Tube.—The ovary presents chronic ovaritis while the fimbriated end of the tube is rounded off and lumen obliterated.

Miscellaneous Cœliotomies.

CASE XIV. *Chronic Ovaritis and Catarrhal Salpingitis. Ablation of Annexa. Cured.*—Mrs. N., aged thirty-one; married twelve years; two children, oldest eleven years and youngest nine years. Both labors were difficult and tedious. She had one miscarriage three years ago which had advanced to three months. Menstruation very irregular, scanty, light red, odorless, clotted, lasted from one to two weeks and returned from three weeks to four months. For the past two years she suffered pain of a dull aching and bearing down character in the right iliac region and back occasionally shooting down the thigh. The pain has been constant with exacerbation and increased by motion and micturition. Leucorrhœa since birth of last child. The patient was troubled with indigestion, nausea, anorexia, constipation, insomnia and dyspnœa on exertion. She had been accustomed for the past year to take morphine or some hypnotic to produce sleep. An examination disclosed an anteversion with the uterus soft and enlarged due to impaired circulation. The right tube and ovary were enlarged, exquisitely sensitive and fixed under the anterior superior iliac spine. It was considered advisable to give her the benefit of daily house treatment and observe what headway this would afford before resorting to surgical interference, but after faithful trial no appreciable amelioration was derived and operation was determined upon.

April 27th.—Ether. The uterine canal was divulsed and cavity curetted in Sims' position by Dr. Rishmiller while the patient was under ether. The uterus was swabbed with carbolic acid and glycerin in equal parts and tamponed with iodoform gauze.

May 14th.—The patient was etherized and placed in Trendelenburg's position. Dr. Hanks made a median abdominal incision of four inches. The right ovary presented nodulations with cystic degeneration and both tube and ovary were ligated, quilted with catgut (No. 4) and ablated. Left annexa normal. The appendix vermiformis was found inflamed and abnormally elongated with central enlargement and adhesions. Appendectomy was performed utilizing catgut. The stump was cauterized with carbolic acid and the peritoneal surfaces were brought together over the wound with fine silk sutures. Abdominal cavity closed with silkworm-gut sutures. Time twenty-five minutes. All the sutures were removed on the tenth day and the wound showed perfect primary union. The patient made a quick recovery and was discharged cured.

Pathologist's Report.—Macroscopic Examination.—Appendix : surface congested. Ovary : normal shape, surface slightly corrugated, bands of adhesions between ovary and tube. Measures 31 × 20 × 15 mm. Tube enlarged, 8 mm. in diameter, much twisted surface slightly roughened.

Microscopic Examination. — Appendix is intensely congested. Ovary shows chronic ovaritis, follicular cysts, large number of small corpora fibrosa and cortex still contains a number of Graafian follicles. Tube shows catarrhal salpingitis with slight dilatation of the lumen.

Case XV. *Retroversion with Diseased Annexa, Salpingo-oöphorectomy and Hysterorrhaphy.*—Miss S., aged forty. Catamenia scanty with clots lasting three days and recurring on the ninetieth day. Pain before, during and after menstruation. Very nervous, hysterical paroxysms, dyspeptic and anæmic. Leucorrhœa and dysuria. Present trouble dates from fall on ice nine years ago. Since has suffered from bearing-down pains in lumbar, iliac and suprapubic regions. Severe vertical and occipital headaches. All symptoms greatly exacerbated during menstruation. Examination disclosed a retroverted uterus with enlarged and prolapsed right ovary.

February 19th.—Dr. Hanks. Ether. Abdominal wall cleansed in the usual manner. Incision below umbilicus of about four inches. Right ovary undergone cystic degeneration—cyst size of English walnut. Left ovary was found indurated and nodular. Both tubes and ovaries were removed, utilizing No. 4 catgut for pedicle ligatures and quilted with No. 1 catgut. Both stumps were cauterized. Anterior surface of fundus uteri scarified and attached to the abdominal wall by one silkworm-gut suture passing through the integument. Abdominal cavity closed with silkworm-gut sutures and dressed with aristol and dry bichloride gauze. All sutures removed on the twelfth day and patient's condition gave excellent satisfaction. Five weeks after operation—uterus anterior and in position with general amelioration of symptoms.

Pathologist's Report.—Both ovaries show chronic ovaritis, follicular cysts and corpora fibrosa. Tubes—catarrhal salpingitis.

Case XVI. *Procidentia Uteri with Lacerated Cervix and Posterior Vaginal Wall.*—Mrs. S., aged thirty-six ; married seventeen years ; six children, oldest sixteen years and youngest six years old. She had one stillborn child at eighth month nine years ago. All her confinements had been tedious and difficult, but with non-instrumental delivery. Menses regular with dysmenorrhœa. Her ailment dated back fifteen years when her second child was born, being lacerated at the

time both internally and externally. Since then she had noticed the uterus protrude from the vulva, accompanied with a dragging sensation in the back and the lower part of the abdomen and a feeling as if her pelvic organ were coming out.

An examination disclosed a laceration of the posterior vaginal wall, a voluminous vagina, a bilateral tear of the cervix uteri and a prolapsed uterus to the second degree.

April 26th.—Dr. Hanks. Patient etherized and in dorsal position. The cervical canal was divulsed and the uterine cavity curetted. The edges of the cervical laceration were denuded, the cicatricial tissue in the angles being removed. The denuded surfaces were brought into apposition by four silkworm-gut sutures on each side. A narrow strip of iodoform gauze was passed up to the fundus uteri for drainage and the vagina was tamponed for the first few days to assist in holding the uterus in place. The patient then was placed in Trendelenburg's position. Median abdominal incision—four inches long. The uterus was lifted out of the hollow of the sacrum with a strong hook. The anterior surface of the fundus uteri and the corresponding surface on the parietal peritonæum were scarified and the cornua uteri were stitched to the abdominal wall with catgut sutures, while one silkworm-gut suture was passed through the anterior surface of the fundus and then through the edges of the abdominal wound and was ligated externally. Abdomen closed and dry dressing applied. Time fifty minutes. An excessive deposit of adipose tissue in the abdominal wall caused a small mural abscess and the healing by granulation was a hindrance to rapid convalescence. Abdominal sutures were removed on the eighth day and the one uterine at the end of two weeks.

May 29th.—The cervical sutures were removed showing perfect result.

June 6th.—Ether. The uterus was found anterior and in perfect position. Needle and carrying thread taking up a point on posterior vaginal wall three inches above the fourchette constituting the apex of denuded surface. Two tenacula grasping inferior limit of vagina two and a half inches apart, establishing base of triangle—requiring denudation. Inclosed mucous membrane of triangle was denuded with universal scissors and brought into apposition with silkworm-gut sutures. Insufflation of iodoform into vagina and a strip of gauze was applied over the vaginal sutures. The sutures were removed ten days after the operation. Discharged cured as she was relieved from her former ailment.

Case XVII. *Hydroperitonæum and Tubercular Peritonitis with Pulmonary Infection.*—Mrs. E., aged thirty-eight. Married sixteen

years, five children, oldest fifteen and youngest five years old. Three miscarriages, first eleven years ago at fourth month and last a year ago at second month. Parents living. Always healthy until two years ago when patient developed *la grippe;* since, has never been well. Exacerbation of all symptoms for last year. Uncomfortable distention of abdomen for last five weeks. Suffers from indigestion, constipation, and interfered circulation with pressure dyspnœa. Pain in epigastric and hypochondriac regions due to pressure. Incessant coughing with profuse greenish-yellow expectoration. Anæmia, emaciation, pinched features, sallow skin and night sweats. Enormous distention of abdomen with unchangeable percussion dullness in both flanks by altering recumbent position of patient and stable tympanites around umbilicus. Uterus pushed to left. Pulmonary percussion, dull over both apices.

February 22d.—Dr. Hanks. Exploratory cœliotomy. Patient etherized. Abdomen cleansed in the usual manner. Incision of four inches opening peritoneal cavity and allowing escape of a large amount of ascitic fluid. Small ovarian cyst on right side rupturing while attempting its removal. Tissues very soft and friable and peritoneal cavity was in a state of chronic tubercular peritonitis, studded everywhere with tubercular nodules. Intestines, omentum, stomach and diaphragm were adherently massed by adhesions, holding intestines in the upper abdominal cavity. Puncture was made from Douglas' *cul-de-sac* into vagina with Hanks' trocar and gauze drainage established through vagina. Peritoneal cavity thoroughly flushed out with warm sterilized water. Abdomen closed. Time twenty minutes. Gauze for drainage was gradually removed from day to day. Sutures removed on twelfth day. Patient discharged three weeks after operation much improved but prognosis unfavorable.

Case XVIII. *Vaginal Hysterectomy. Complete Procidentia Uteri. Recovery.*—Mrs. B., aged thirty-three. Married six years, one miscarriage five years ago, advanced six months. To all indications patient is in the stage of tertiary syphilis. Anorexia and indigestion, constipation and frequent dysuria. Present ailment dates back five months, when she first noticed a protrusion of the uterus since, prolapse has continually increased until now the uterus is in the third stage of prolapse, dragging down with it, the whole bladder, causing the constant dysuria or rather an overflow and incomplete voiding of urine making it ammoniacal and phosphatic. The unilateral laceration of the cervix created a painful uncomfortableness from the wounded surfaces constantly rubbing against wearing apparel.

February 13th.—Dr. B. Emmet in consultation concurred as regards the vaginal operation considering the flaccidity of the abdominal wall and non-support of the pelvic floor with increased size and weight of prolapsed organ, advised vaginal hysterectomy.

22d.—Dr. Hanks. Ether. Patient in dorso-sacral position and previous preparation same as for cœliotomy, besides vaginal douches and tamponing of iodoform gauze daily for one week. External genitals and vagina thoroughly cleansed in the usual antiseptic manner. The cervix was seized with volsella and block-tin sound passed into the bladder serving as a vesical guide. The bladder on account of procidentia was intimately adherent to the elongated cervix and separation was exceedingly difficult, great precaution being necessary not to buttonhole the bladder. After separating the bladder and uterus with scissors the posterior dissection was undertaken. The uterine arteries were ligated with No. 4 catgut. The broad ligaments were ligated with catgut, inversion being prevented by elongated cervix. The uterus was extirpated *in toto* leaving behind one healthy tube and ovary. The usual amount of hæmorrhage attributable to prolapsed organs impeding venous circulation though easily checked by ligation. Vaginal fornices were brought into apposition with No. 1 catgut, a large central opening was left and tamponed with sterilized iodoform gauze, thus establishing free drainage *per vaginam.* The patient was returned from the operating room in good condition and rallied with very little shock. Bowels moved on third day with half a grain of calomel every half-hour until eight doses were given. Commenced removing vaginal gauze on the third day (two to six inches) and continued daily removal to encourage drainage, taking away the last and longest piece on the eighth day. Seventh day: Warm creolin douche, one drachm to one quart three times a day. Temperature always remained below 100° F. (rectal) the pulse holding same ratio. On seventeenth day patient was up and about making an uneventful convalescence.

Pathologist's Report.—Macroscopic Examination.—Uterus measures ten centimetres long and five centimetres across cornua. Section shows walls thickened cavity of body slightly dilated and mucous membrane thickened. Tube enlarged, fimbriated end occluded and rounded.

Microscopic Examination.—Ovary shows chronic ovaritis, small cysts, large corpora fibrosa. Tube shows suppurative salpingitis. Uterus shows chronic endometritis.

Case XIX. *Vaginal Ligation of Uterine Arteries for Fibroma Uteri.*—Mrs. M., aged forty-two. Married twenty-five years; eight children, oldest twenty-three and youngest seven years old. Four

miscarriages first three years ago, last six months ago and period of utero-gestation all of three months. Catamenia profuse with clots, lasting six days and interval twenty-eight days. Excessive leucorrhœa for last six years. Severe pain in suprapubic and lumbar-sacral regions. Impossible to defecate for last year without rectal enema. Uterus uniformly enlarged and six inches deep. Sound passes over a rough body while exploring uterine cavity.

February 8th.—Dr. Coe. Patient etherized and in dorsal position. Sims' speculum drawing down the relaxed perinæum and another utilized as a lateral retractor. Cervix grasped with volsella and drawn down. Left lateral fornix cut with scissors and tissue dissected up with forefinger until uterine artery was detected pulsating when Cleveland's ligature passer threaded with pedicle silk was guided around the uterine artery which was ligated. Wound closed with fine silk continuous suture. Same manœuvre was practiced on right side. Cervix uteri was divulsed and uterine cavity curetted and tamponed with iodoform gauze. Vagina firmly packed with gauze which was removed, together with the gauze in the uterus, on the fourth day. Sutures removed two weeks after operation. Immediate decrease of fibroma uteri treated in this conservative manner can not be expected in such a brief time, but we must wait and observe the effect of the limited nutrition in order to appreciate the benefit derived from ligating the uterine arteries. This case will be kept under observation and any changes in the size of the growth will be noted.

Preparation for Plastic Operations.—About twelve hours before the patient receives a full warm bath and is given an ounce of a saturated solution of magnesium sulphate. Six hours before the operation she is given two pints of soapsuds as a high enema. The patient receives no solid food for twelve hours previous to the operation while an ounce of brandy is administered half an hour before starting the anæsthetic. This quantity varies according to the habits and conditions of the patient. The external genitals are shaved and two bichloride (1 to 3,000) vaginal douches given; one two hours before the operation and another directly before the patient is brought to the anæsthetizing room. After the patient is anæsthetized the vagina and external genitals are thoroughly cleansed with the tincture of green soap and water; this is followed by bichloride (1 to 3,000) irrigation.

Case XX. *Vesico-vaginal Fistula implicating Destruction of Base of Bladder Closure.*—Mrs. K., aged twenty-seven. Admitted May 25, 1893. Married four years; two children, oldest two years and youngest nine months. Previous history, up to birth of last child, good.

Duration of last labor nine hours. Presently complains of the discomforts caused by constant dripping away of urine.

Her attending physician, subsequent to delivery of child, noticed a mass protruding from the vagina which he believed to be the placenta. Without careful examination, this undoubtedly œdematous prolapsed bladder was seized and forcibly drawn down—thus tearing away the whole base of the bladder, as the patient immediately after this procedure observed the continuous escape of urine *per vaginam.* Nature finally came to the rescue and the placenta was ultimately delivered.

Examination revealed an entire loss of the base of the bladder with a left laceration of the cervix uteri. Both ureters and the fundus of the bladder were demonstrated by direct inspection. This case is of great interest, since the accident which caused the fistula was so unusual. The tear of the base of the bladder began on the left side of the cervix in front of the anterior lip and continued to the opposite—the right side—and then forward by the right side of the roof of the vagina near to the union with the bone until almost to the meatus. Three preliminary operations were performed in order to gain tissue enough to form a base for the bladder, consisting of stretching and cutting of cicatricial bands and bringing them into apposition by No. 30 silver-wire sutures until finally a small fistula remained. For fear of non-union for the final closure of the fistula on account of the large amount of cicatricial tissue patient was discharged, to return in three months hoping that some of the tissue might improve before the final operation.

January, 1894.—Patient readmitted and general condition showed improvement.

February 1st.—Dr. Hanks. Patient etherized. The edges of the fistula were denuded, going back a quarter of an inch on the vaginal mucous membrane, and closed by seven No. 30 silver-wire sutures. Sigmoid catheter introduced and changed daily for eight days when the patient was allowed to urinate whenever bladder felt distended, going three to four hours. The bladder was irrigated with warm four-per-cent. solution of boric acid whenever replacing the catheter. The vagina was tamponed with iodoform gauze and removed on the fourth day and antiseptic douches given.

12th.—Sutures removed and union perfect. Discharged cured on the fourteenth day.