

THE TECHNIQUE OF VAGINAL HYSTERECTOMY IN  
CASES OF PELVIC INFLAMMATION.\*

BY WILLIAM R. PRYOR, M.D.,  
New York City.

The late Dr. R. P. Harris, in conversation with a number of us some years ago, said: "I will *make* you men perform symphyseotomy." By this expression the Doctor intended to convey to us that he would produce such overwhelming evidence of the value of symphyseotomy that no reasonable surgeon could refuse to accept the operation as having distinct indications. I may not be in a position to make the profession adopt the operation under discussion, but at least I shall show how far better my results are now than when I approached these cases through the abdomen. And in order that others may have equally good results, I shall, as clearly as I am able, give the various steps of the operation.

*Posture of Patient*, (Fig. 1). The patient should be in the old lithotomy posture, her legs held flexed upon the abdomen by Clover's crutch. She should lie upon a table which will allow the operator to

\*The illustrations used in this article are kindly furnished by Messrs. D. Appleton & Co., publishers of the author's "Text-Book of Gynecology."

lower the head of the table so as to secure the benefits of Trendelenburg's position. After the operation is completed a final inspection of the stumps is necessary, during which the intestines will not prolapse into the vagina, if the head of the table is lowered.



Fig. 1. Upon dropping the head of the table the pelvic muscles relax as soon as they cease to feel the necessity for supporting the viscera, and thus the valva is readily opened by retractors so that the pelvic contents may be inspected.

*The Incisions.* (Fig. 2). In most cases the posterior crescentic incision is first made, then the one anterior to the cervix. Between the adjacent ends of these two cuts I usually leave a small strip of vaginal skin. The incision outward from the sides of the cervix (Ségond's)

and along the anterior vaginal wall (Dührssen's) or down the posterior wall (Henrotin's) I seldom employ, and when either is used it is in case there is much contraction about the vault of the vagina due to connective tissue. Henrotin's cut I also use in cases having deep peritoneal pouches, so that the lowest point of these may be drained. The incisions are preferably made with stout scissors. The use of the cautery knife is entirely unnecessary and often consumes valuable time. After the posterior cul-de-sac is entered, a methodical examination of the pelvic contents is made. In effecting an entrance into the pouch of Douglas some difficulty may be experienced. In all cases the vaginal skin is readily incised and upon holding down the pos-

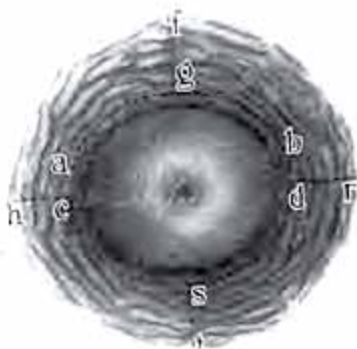


Fig. 2. The incisions agb and csd are the ones the author usually employs. Additional space may be secured by making Henrotin's (st) or Ségond's (ch and dr).

terior flap the loose connective tissue underlying the peritoneum comes into view. The operator holds the cervix by stout three-pronged forceps and attempts to enter Douglas' pouch by means of his finger. He may be disappointed to find that the peritoneum is unusually thickened and stout and merely rips up from the posterior surface of the uterus before the advancing finger. When this occurs, the incision should be freely exposed and the peritoneum pulled down by a tenaculum and incised.

Beginners in this line of work may be undecided whether the presenting part is the rectum or thickened peritoneum. In all cases a small amount of serous fluid is found in the pouch of Douglas, and this will show through the peritoneum when the latter has been thinned by the dissection. There are, however, cases in which the posterior

peritoneal pouch cannot be entered. In case an ectopic gestation has ruptured between the folds of the broad ligament, it may dissect the peritoneum up from the pelvic floor and from in front of the rectum. Again, a retroperitoneal fibromyoma may lift the posterior peritoneum out of reach. In the former case, the adnexa can be examined only after the bladder has been separated from the uterus; and in the lat-

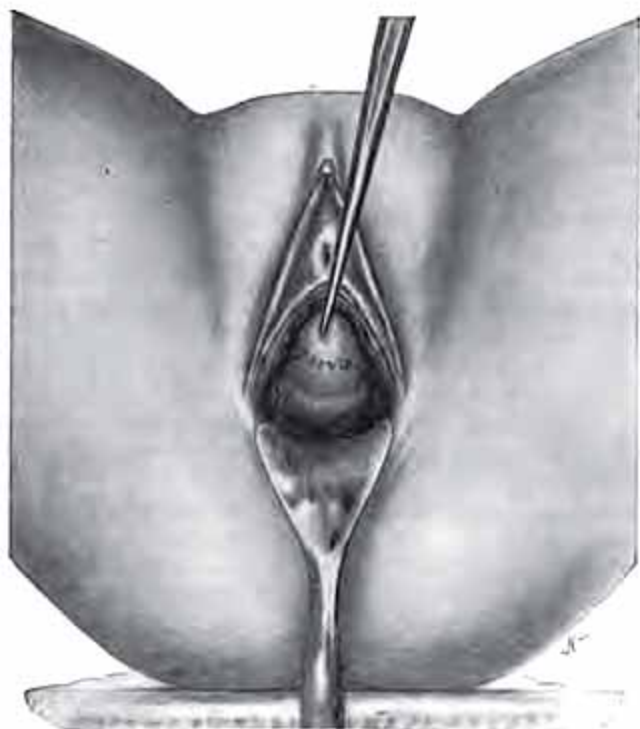


Fig. 3. The cervix is held up and the crescentic fold behind the cervix shows where the incision must be made.

ter, the removal of the fibroid nodule will produce the desired breach into the peritoneal cavity. The posterior peritoneal pouch is readily entered either by simply incising the vagina and pushing the finger through the peritoneum or by the use of mouse-toothed forceps and scissors. The advantage is with the former method, as by means of the finger every step of the dissection can be felt.

It is more difficult to separate the bladder from the uterus. In certain cases I derive great assistance from my intra-uterine traction forceps which not only furnish a means of fixing a soft and small uterus, but also greatly aid the surgeon in differentiating the uterine from the vesical tissues. If the anterior tissues are severed too close to the external opening of the cervix, the dissection will be most difficult; but if made where the cervix joins the vagina it will proceed with ease through the loose reticulated tissue which lies between the bladder and the uterus. There are several ways in which the bladder may be separated from the uterus. I prefer to lay the edge of the closed scissors in the cut and to shove up the tissues in much the same way as a periosteum elevator is employed. In most cases but a moment is consumed in peeling the bladder up as high as the level of the internal os, and after that the fingers are employed to complete the dissection. Here, as posteriorly, the peritoneum may be found so thick as simply to peel up ahead of the entering finger. This can readily be determined and then the peritoneum is to be pulled down and cut by scissors. As a posterior retractor I employ the short, broad speculum of Jackson and a somewhat narrower instrument to hold up the anterior vaginal wall. Up to this stage the operator has made no attempt to separate more adhesions than will enable him to feel and, if necessary, to see the adnexa, or only sufficiently to determine the necessity for a radical operation. No attempt so far has been made to liberate the adnexa for removal. Upon the posterior vaginal wall a small artery, the azygos, has been cut, but except in puerperal and fibroid cases, is not sufficiently important to require even forcible pressure. If desired, it may be readily secured. I have noticed very frequently, as I peel up the bladder, that a substantial vessel extends obliquely across the anterior face of the cervix from one uterine artery to anastomose with the inferior vesical; and, while I have never kept count of the side from which it springs, the fact has been impressed upon me that it most always arises from the left uterine artery. This aberrant trunk is very large in women who have been recently delivered, and in fibroid cases. In all cases it should be secured and tied. After the operator has opened the posterior and anterior pouches of peritoneum, the incisions should be spread laterally. The posterior is so treated by means of the two index fingers, while one finger will suffice to push the bladder from the sides of the uterus as well as the front. This is done to make the rents in the peritoneum of equal size with the incisions in the vaginal skin. If the intestines tend to prolapse into the vagina, this may be prevented by introducing small gauze pads to



which are securely attached stout linen lines that they may be recovered, or by dropping the head of the table so that the diaphragmatic force will be overcome.

*Hemisection.* (Fig. 4.) This is an invariable, not an occasional, step in the operation. After, or even before the anterior peritoneal pouch has been opened, the operator splits the anterior face of the cervix with scissors as high up as he can see it. This will usually be up to the

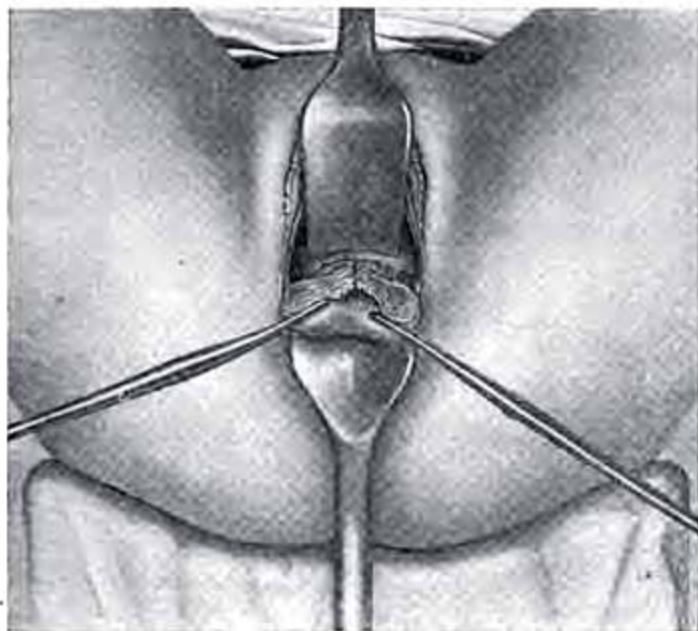


Fig. 4. First step in hemisection: splitting the cervix.

line of peritoneal reflection. While an assistant holds apart the edges of the severed cervix, the operator seizes the cervix upon each side of the apex of the cut and forcibly draws downward and outward. It will now be seen that a portion of the anterior face of the uterus appears covered by peritoneum. This is split in the median line, its sides grasped by heavy toothed forceps as before, and more of the uterus pulled down beneath the bladder. About three steps in this splitting of the anterior uterine wall will suffice, when the

cornua uteri will appear beneath the anterior incision, often somewhat abruptly. The operator now runs his finger up behind the uterus, keeping in the middle line until he can see or feel its tip above the fundus. Withdrawing the finger a retracting grooved director which I devised for this purpose is passed up until it shows beneath the anterior retractor. The posterior retractor is then withdrawn. This grooved

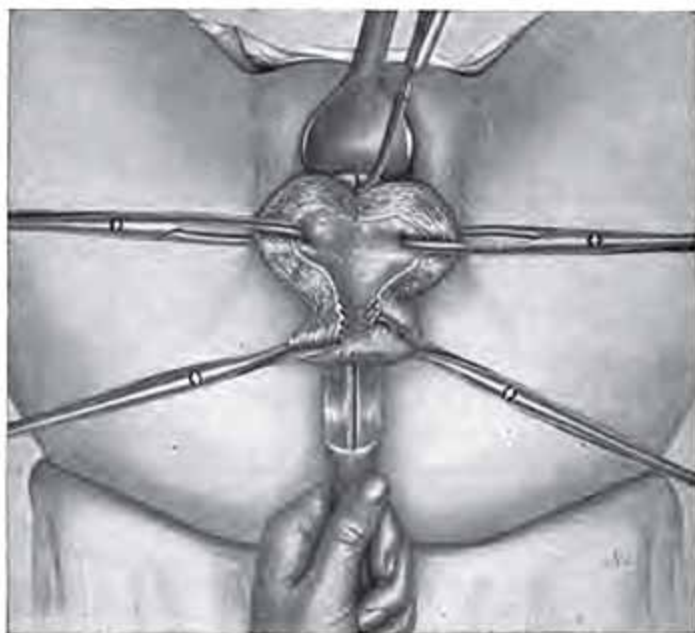


Fig. 5. The anterior wall of the uterus has been split and the grooved retractor is introduced behind the uterus. The knife is in place prepared to complete the hemisection.

director is used not only to retract the perineum, but also to draw the uterus forward. It is therefore particularly useful in large, soft uteri the tissues of which tear under the toothed forceps. Into this director a special bistoury is introduced and the posterior wall of the uterus is cut through. (Fig. 5). The uterus is now halved. The peculiarity of the bistoury is that the cutting edge is along its convexity. The moment the uterus is split in two the bilateral fixity is done away with, and upon each side at least part, the uterine, of the mass be-

comes freely movable. The operator therefore has to deal with movable halves of the uterus, attached to which are the corresponding adnexa adherent to the broad ligaments or pelvic wall. Furthermore, the uterus which up to this point has blocked the entrance to the pelvis, is no longer a hindrance. The right half is released from the forceps and is shoved up into the pelvis, and all retractors are withdrawn. The operator then pulls the left half of the uterus out of the vulva



Fig. 6. All retractors are withdrawn. The hand has been forced into the pelvis to free adhesions, while the left half of the uterus is pulled down.

and introduces his left hand up to the thumb into the vagina. (Fig. 6). This enables him to manipulate the higher adhesions perfectly. If he feels that the omentum or intestines are attached to the uterus or adnexa he can introduce retractors and separate the adhesions under the guidance of the eye. Whenever a tubo-rectal fistula is known to exist, that tube is handled last. After the left tube and ovary are rendered so movable that they can be brought beneath the bladder and into the vagina, these are released and with the attached half of the uterus are



returned into the pelvis. The right half of the uterus is now drawn down and its adherent adnexa liberated by the right hand introduced as was the left. If the vulva is contracted by the formation of connective tissue, as in some old cases and in women past the menopause, it may be necessary to lubricate the hand with boroglyceride or sterile vaseline before it can be introduced. I have never found it necessary to split the perineum. Were I unable to make a complete operation without doing so I would abandon it and perform laparotomy. Neither is it necessary to pass a bougie into the rectum. In fact, doing so conduces to its injury. All the tissues should be movable. After both sets of adnexa have been rendered movable, hemostasis is done. Up to this point the operator has not attempted hemostasis, but has bent all his energies to liberating the organs to be removed. So long as the uterus was pulled down the bleeding was trivial, but when one-half is shoved up and during the liberation of the adnexa the bleeding is free. If the surgeon stands in ignorance of its cause and in fear of its importance and puts on forceps before the adnexa are liberated, he will probably find that he will be unable to secure the ovarian arteries outside the ovaries and will be compelled to content himself with an incomplete operation. As the operation was first done here it proceeded under preliminary hemostasis, the uterine arteries and then the broad ligaments being clamped and serially severed. It was no unusual thing to see patients with eight or more pairs of forceps sticking in the vagina and large portions of diseased adnexa left high in the pelvis. Rarely, very rarely, is a quarter of an hour needed to release and remove the tissues under a complete hemostasis. During this time the bleeding is parenchymatous only. The same manual dexterity which will enable the operator to free a pus focus from the iliac vessels through an abdominal incision, will more easily accomplish the same manœuvre through the vagina.

A forceps is first applied to an ovarian artery. One-half of the uterus is pulled out of the vagina and its adnexa brought forward. No retractors are necessary. The forefinger upon one side of the broad ligament and the middle finger upon the other, while the thumb powerfully doubles the uterus and holds the adnexa, converts the entire mass into a pedunculated one and the forceps is applied from above downward. This forceps grasps the top of the broad ligament and the round ligament. It is locked and its handles removed. (Fig. 7). The tissues are cut to its ends and another forceps applied to the rest of the tissues, including the uterine artery, locked, and its handles removed. The uterus and adnexa are then cut

away. The other half of the uterus with its adnexa are similarly treated. Anterior and posterior retractors are then introduced and lateral blades used to hold back the forceps and their stumps. Several



**Fig. 7.** The right half of the uterus is doubled upon itself. The broad ligament lies between the index and middle fingers, while the thumb grasps the adnexa. The forceps is grasping the top of the right broad ligament.

gauze pads are passed into the pelvis to take up blood and discharges. The operator then makes a careful inspection of the stumps to identify the four cardinal vessels and to assure himself that there is no bleeding. The dressings are then made. In this more than in any other

regard does my technique differ from that of the French surgeons. I have classified this operation as the formation of four stumps or pedicles which will slough and which must therefore be treated extraperitoneally. And the dressings must be so adjusted as to maintain the stumps outside the pelvis and in the vagina after the forceps are removed. Furthermore, this pelvic Mikulicz must be sufficient to isolate the field of operation from the peritoneal cavity and to absorb all discharges. Repeated examinations have shown that the dressing



Fig. 8. Method of applying the pelvic Mikulicz dressing which supports the the forceps and stumps.

also destroys all cocci, a matter of great importance in streptococcus infection, in which not only the uterus and adnexa are involved, but the retroperitoneal tissues as well. The dressings are applied in the following manner. I use Péan's narrow retractor to draw down the perineum and vagina and my narrow trowel to lift the anterior vaginal wall. The gauze pads are removed. The forceps are all drawn down carefully until their stumps are in the vagina. While holding each set in this position, a piece of iodoform gauze is adjusted between the forceps and the vagina, and by means of a long, narrow re-

tractor these two forceps are held firmly against the side of the vagina. (Fig. 8). The same is done upon the other side. Then, between the forceps so held, I introduce enough folded strips of iodoform gauze to create a stout bilateral pressure. The gauze between the forceps extends just above their tips, and in applying it the operator should see that at no point does a forceps touch the soft parts, particularly the intestine and bladder. A self-retaining catheter is now introduced and the sphincter ani dilated. This is done to lessen spasm of the levator ani, the sphincter's opposing muscle. I remove the



Fig. 9. Appearance of specimen removed by the classical operation of hemisection.

forceps in 48 hours, and six hours later wash out the bladder and remove the catheter. I cannot here describe the after-treatment.

I am frequently asked what position the ureters assume during this operation. I have determined this by repeated dissections. As stated, the operator should see that the bladder is entirely freed from attachment to the uterus. With the perineum held down and the bladder up, down-traction upon one-half of the uterus removes the cervix and its vessels away from the ureter.

I will complete a report of my cases to date. In this list, as in the previous one, I have included the fibroid cases, for very often fibroids are associated with pelvic inflammation, and pus cases often show small fibroid nodules in the severed uterine walls.



## REPORT OF CASES

181 Operations; no deaths: previously reported in "American Medicine," April 27, 1901

NO.	DATE	CASE	AGE	HOSPITAL	FROM	DIAGNOSIS	OPERATION	RESULT
182	May 29, '01	Y. G.	22	Polyclinic	Clinic	Syphilis, bilateral pyosalpinx	Vaginal hysterectomy, hemisection	Cured
183	June 13, '01	A. B.	20	Polyclinic	Dr. Vineberg	General pelvic adhesions, hæmorrhage of right ovary, right salpingitis	Vaginal hysterectomy, hemisection	Cured
184	Sept. 28, '01	Mrs. B.	43	Polyclinic	Clinic	Chronic salpingitis and prolapse	Vaginal hysterectomy, hemisection	Cured
185	Oct. 31, '01	Mrs. MW	38	Polyclinic	Clinic—Dr. Mary Doolittle	Double pyosalpinx and ovaritis	Vaginal hysterectomy	Cured
186	July 18, '01	L. S.	27	Polyclinic	Clinic	Hydrosalpinx, ovarian abscess on right side, left pyosalpinx. Patient died from secondary hæmorrhage due to the fact that the nurse had put together forceps which were not mates, and the blades of the forceps on the left uterine artery did not meet	Vaginal hysterectomy, secondary laparotomy; no bleeding point found.	Died
187	Jan. 25, '02	B. A.	20	Polyclinic	Clinic	Bilateral pyosalpinx, gonorrhœal urethritis	Vaginal hysterectomy, hemisection	Cured
188	Jan. 25, '02	R. A.	28	Polyclinic	Clinic	Double hydrosalpinx, multiple adhesions, recurrent attacks peritonitis	Vaginal hysterectomy, hemisection	Cured
189	Mar. 13, '02	Mrs. T.	37	Polyclinic	Clinic—Dr. M. Aronson	Fibroids with diffuse suppuration	Vaginal hysterectomy, morcellation	Cured
190	May 5, '02	J. S.	27	Polyclinic	Clinic	Diffuse pelvic suppuration	Vaginal hysterectomy, hemisection	Cured
191	May 26, '02	F. R.	34	Polyclinic	Clinic	Multiple Fibromyoma	Vaginal hysterectomy, morcellation	Cured
192	Mar. 6, '02	B. P.	20	Polyclinic	Laparotomy for appendicitis six months ago.	Pyosalpinx	Vaginal hysterectomy, hemisection	Cured

193	Mar. 1, '02	H. W.	23	Polyclinic	Clinic—Dr. C. Laase	Pelvic suppuration	Vaginal hysterectomy, Cured hemisection
194	Dec. 22, '02	J. K.	40	Polyclinic	Dr. Whitney	Pelvic adhesions, right ovary cystic, left pyosalpinx, broncho-pneumonia during convalescence	Vaginal hysterectomy, Cured hemisection
195	Nov. 17, '02	J. G.	21	Polyclinic	Clinic	Right hydrosalpinx, left pyosalpinx	Vaginal hysterectomy, Cured hemisection
196	Nov. 1, '02	E. N.	23	Polyclinic	Dr. Taylor	Bilateral pyosalpinx	Vaginal hysterectomy, Cured hemisection
197	June 17, '02	E. B.	32	Polyclinic	Clinic	Bilateral pyosalpinx, ovarian abscess	Vaginal hysterectomy, Cured hemisection
198	June 5, '02	S. S.	20	Polyclinic	Clinic	Diffuse pelvic suppuration	Vaginal hysterectomy, Cured hemisection
199	May 22, '02	M. M.	30	Polyclinic	Clinic	Diffuse pelvic suppuration	Vaginal hysterectomy, Cured hemisection
200	May 22, '02	M. F.	23	Polyclinic	Clinic	Tuberculosis of tubes and ovaries	Vaginal hysterectomy, Cured hemisection
201	May 12, '02	M. W.	35	Polyclinic	Clinic	Uterine fibroids	Vaginal hysterectomy, Cured hemisection
202	Mar. 27, '02	M. W.	—	Polyclinic	Clinic—Dr. Alfred Riedel	Bilateral pyosalpinx	Vaginal hysterectomy, Cured morcellation
203	Mar. 22, '02	A. McB.	35	Polyclinic	Clinic—Dr. D. T. Macdonald	Bilateral pyosalpinx	Vaginal hysterectomy, Cured hemisection
204	Jan. 12, '02	B. R.	—	Polyclinic	Clinic	Bilateral pyosalpinx	Vaginal hysterectomy, Cured hemisection
205	Mar. 29, '02	E. F.	38	Polyclinic	Clinic		
206	Mar. 20, '02	S. F.	20	Polyclinic	Clinic	Diffuse pelvic suppuration	Vaginal hysterectomy, Cured hemisection

NO.	DATE	CASE	AGE	HOSPITAL	FROM	DIAGNOSIS	OPERATION	RESULT
207	Nov. 13, '02	M. H.	32	Polyclinic	Clinic—Dr. Alfred Riedel	Right broad ligament fibroid, small fibroids, of uterine body	Vaginal hysterectomy, morcellation	Cured
208	Sept. 11, '02	I. M.	27	Polyclinic	Clinic	Had been operated upon by laparotomy for removal of one pyosalpinx. There existed abdominal sinus	Removed the uterus by vagina with right pyosalpinx; excised abdominal sinus; hemisection.	Recovered, but sinus failed to close
209	Oct. 6, '02	R. G.	30	Polyclinic	Clinic	Bilateral pyosalpinx	Vaginal hysterectomy, hemisection	Cured
210	June 18, '02	T. B.	57	Polyclinic	Clinic	Uterine fibroids	Vaginal hysterectomy, morcellation	Cured
211	Apr. 27, '02	D. S.	42	Polyclinic	Clinic	Prolapse of uterus and old tubo-ovarian lesions	Vaginal hysterectomy, en masse	Cured
212	Oct. 24, '02	Mrs. H.	30	Polyclinic	Dr. Curtis	Bilateral pyosalpinx, left ovarian cyst	Vaginal hysterectomy, hemisection	Cured
213	Dec. 12, '01	M. R.	22	Polyclinic	Clinic—Dr. B. Torrens	Genital sclerosis, left broad ligament cyst	Vaginal hysterectomy, hemisection	Cured
214	Apr. 5, '02	M. A.	35	St. Vincent's	Dr. McSwords, Heppner, Ore.	Bilateral miliary and ulcerative tubercular salpingitis. In the second week of convalescence fulminating appendicitis	Vaginal hysterectomy, hemisection, appendectomy	Cured
215	May 5, '02	A. R.	54	St. Vincent's	Dr. McKay, Canton, N. Y.	Multiple uterine-fibroids, extending two inches above pubis	Vaginal hysterectomy, morcellation	Cured
216	June 29, '02	A. T.	28	St. Vincent's	Dr. McKay, Canton, N. Y.	Chronic inflammation in stumps of previous abdominal salpingo-ophorectomy. Persistent pelvic pain and recurrent attacks of pelvic peritonitis	Vaginal hysterectomy, hemisection	Cured

217	July 23, '02	C. F.	22	St. Vincent's Dr. Fowler, Des Moines, Ia.	Chronic bilateral salpingitis	Vaginal hysterectomy	Cured
218	June 28, '02	K. T.	52	Sanitarium Office	Multiple uterine fibroids— ovaries and tubes left	Vaginal hysterectomy, morcellation	Cured
219	Oct. 3, '02	F. McK.	37	Sanitarium Dr. Gregory, California, curetted 3 times for hemorrhages	Fibroids	Vaginal hysterectomy, morcellation	Cured
220	June 5, '02	R. L. W.	30	Sanitarium Dr. Dale, Texas	Pachysalpingitis, Graafian follicle cysts	Vaginal hysterectomy, hemisection	Cured
221	June 18, '02	Mrs. D.	26	Sanitarium Dr. Heyman, Brooklyn Dr. Cushing, Boston	Diffuse pelvic suppuration	Vaginal hysterectomy, hemisection	Cured
222	Sept. 2, '02	M. K.	30	Sanitarium Dr. Strauss	Bilateral tubo-ovarian abscess, small intestine on point of gangrene from strangulation by adhesions	Vaginal hysterectomy, hemisection	Cured
223	Jan. 8, '03	A. O.	23	Polyclinic Dr. Kolb	Bilateral pyosalpinx, etc.	Vaginal hysterectomy, hemisection	Cured
224	Jan. 19, '03	Mrs. M.	46	Polyclinic	Bilateral ruptured ectopic gestation; general septicæmia; double broncho-pneumonia	Vaginal hysterectomy, hemisection	Cured
225	Dec. 14, '02	Mrs. S.	30	Sanitarium Dr. Albert Kohn	Right hydrosalpinx, cystic ovary, left pyosalpinx	Vaginal hysterectomy, hemisection	Cured
226		W. L.	46	Sanitarium Dr. Griswold, Greenwich, Conn.	Chronic tubo-ovarian disease. Multiple adhesions. A chronic invalid	Vaginal hysterectomy, hemisection	Cured
227	Case in Buffalo,	by	courtesy of	Prof. Matthew D. Mann	Chronic bilateral salpingitis, adhesions	Multiple Vaginal hysterectomy, hemisection	Cured
228	Case in Boston,	by	courtesy of	Dr. Charles G. Cumston	Bilateral pyosalpinx	Vaginal hysterectomy, hemisection	Cured

Total, 228 cases; one death; mortality, 0.4 per cent.

6 West 84th Street