

On intra-uterine fibroids / by J. Marion Sims.

Contributors

Sims, J. Marion 1813-1883.
Royal College of Surgeons of England

Publication/Creation

New York : D. Appleton, 1874.

Persistent URL

<https://wellcomecollection.org/works/zu8tyuuh>

Provider

Royal College of Surgeons

License and attribution

This material has been provided by This material has been provided by The Royal College of Surgeons of England. The original may be consulted at The Royal College of Surgeons of England. where the originals may be consulted. This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

6

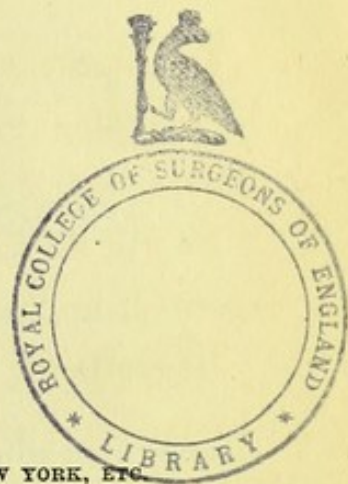
ON

INTRA-UTERINE FIBROIDS.

BY

J. MARION SIMS, M. D.,

SURGEON TO THE WOMAN'S HOSPITAL OF THE STATE OF NEW YORK, ETC.



[REPRINTED FROM THE NEW YORK MEDICAL JOURNAL, APRIL, 1874.]

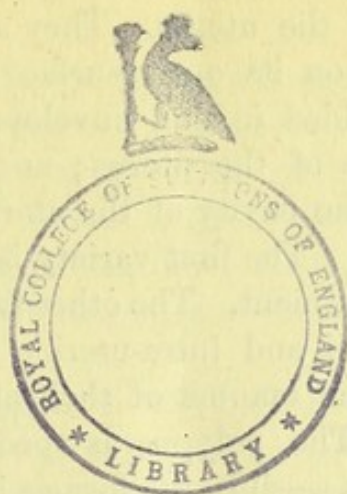
NEW YORK:
D. APPLETON AND COMPANY,
549 & 551 BROADWAY.
1874.

THE JOURNAL OF THE

AMERICAN MEDICAL ASSOCIATION

PUBLISHED WEEKLY

CHICAGO, ILL., U.S.A.



ON INTRA-UTERINE FIBROIDS.¹

MR. PRESIDENT AND GENTLEMEN :

THE names of Atlee and Peaslee will always be associated as pioneers in establishing ovariectomy in this country as a legitimate operation. But the name of Atlee stands without a rival in connection with uterine fibroids. His operations were so heroic that no man has as yet dared to imitate him. A generation has passed since he gave to the world his valuable essay² on the surgical treatment of fibrous tumors of the uterus; but it is only within the last five or six years that the profession have come to appreciate the great truths which he labored to establish. Meadows, of London, and Thomas, of New York, have each achieved splendid results in this direction, and made valuable contributions to our literature. A few isolated cases of fibroid enucleation have been published

¹ Read at the annual meeting of the New York State Medical Society at Albany, February 6, 1874.

² Prize Essay: "The Surgical Treatment of certain Fibrous Tumors of the Uterus, heretofore considered beyond the Resources of Art." By Washington L. Atlee, M. D., of Philadelphia. Extracted from the transactions of the American Medical Association for the year 1853.

by others, and this is about all that we can boast of since Atlee first led the way for us.

Uterine fibroids are classified according to their relations with the tissues of the uterus. They are called subserous or extra-mural when on its outer surface; interstitial or intra-mural when embedded in and enveloped on all sides by the muscular structure of the uterus; and intra-uterine or sub-mucous when in the cavity of the uterus, with broad attachments to its walls. The first variety is, as a rule, not amenable to surgical treatment. The other two are. Histologically intra-uterine polypi and intra-uterine fibroids are identical, differing only in the manner of their attachment to the walls of the uterus. The polypus is pedunculated, while the fibroid, so called, is sessile; the former is attached to the fundus or to some portion of the inner surface of the uterus by a firm, fibrous band varying in size from half an inch to an inch or more in diameter, while the latter is extensively attached by fibrous and cellular tissue.

It is only within the last ten years that the removal of intra-uterine polypi has been rendered absolutely safe. By the old and clumsy method of ligation the mortality was immense. But by the modern method with the *écraseur*, and by the still easier method of excision with scissors, their removal is positively free from all danger. I have never seen a death, nor have I ever heard of one, from either direct or remote consequences of a properly-performed operation for polypus.

Intra-uterine fibroids are usually, I might say almost always, capsuled. They are sometimes polycystic; but more frequently solid. When cystic, the cysts vary in size from that of a filbert to that of an orange or a cocoa-nut. The solid tumors are generally more easily removed, because their tissue, being more resistant, does not break down so readily under forcible traction.

It is my intention here to speak of the improved methods of removing these tumors when practicable. I say practicable, because there are many cases, perhaps the majority, where operative measures are not called for, and would be unjustifiable. A fibroid is not, *per se*, a dangerous thing. It is rarely dangerous except when it gives rise to severe hæmorrhages, and then

only are we justified in attacking it by surgical means. If there is no unusual and exhausting loss of blood, it is wiser and safer for the patient to accept her condition as one of infirmity, and to make the best of it. Under these circumstances the tumor is simply a matter of inconvenience, producing temporary but bearable discomfort by mere mechanical pressure on the pelvic organs, and this generally only when the tumor is comparatively small. When it grows large enough to rise above the brim of the pelvis, the patient suffers only as she would with the gravid uterus at a similar state of development.

But, laying aside generalities, I shall proceed at once to illustrate the principles of treatment by detailing a few cases that have occurred in my practice (private and hospital) since our last meeting :

CASE I.—Mrs. H., aged forty-six years ; mother of four children all grown ; has had menorrhagia for the last seven years. At first it was attended with great pain, but latterly the bleeding has been of a passive character, and painless. A few months before I saw her, she applied to a physician (female), who cauterized what was supposed to be granular erosion of the os. After a while, another physician was called in consultation, and the cauterizations were continued. By-and-by they discovered that it was not a simple case of granular erosion, but a tumor of some sort protruding from the canal of the cervix. The patient soon afterward fell under the care of Dr. E. H. Parker, of Poughkeepsie, who at once recognized the true character of the disease, and sent for me, saying we had to deal with an intra-uterine fibroid. I saw the case on the 6th of July, and agreed with him as to the necessity of surgical interference.

Mrs. H. was completely anæmic. When she was not losing blood, she had a profuse muco-albuminous leucorrhœa from the cavity of the uterus, which was quite as debilitating as the loss of blood. The os tinæ was found dilated to about an inch in diameter ; the rounded, glistening surface of the tumor could be felt and seen on a level with the thinned edges of the os ; the finger could be passed high up into the cavity of the uterus anteriorly and to the left side ; everywhere else the

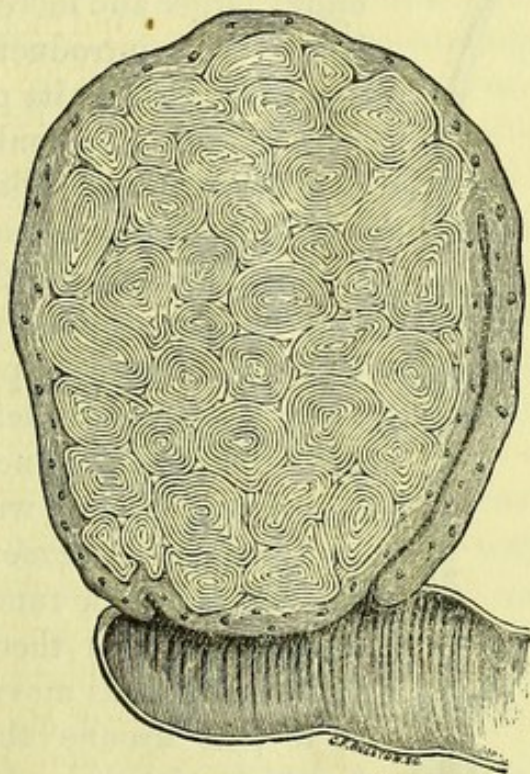
tumor was closely attached to the walls of the womb. Altogether the case was favorable for operation, and we thought it should be done at once. But Dr. Parker had two cases of erysipelas under his care at the time, and we feared to perform the operation at Poughkeepsie. As I was then at Newport for the summer, Dr. Parker sent his patient there for operation, and it was performed on the 26th of July. Dr. Sands, Dr. Engs, and Dr. Watson assisted, and Dr. Harry Sims gave nitrous-oxide gas. It took about two minutes to produce anæsthesia; the operation lasted seven minutes, and in one minute more there was entire consciousness; she was, then, just ten minutes under the influence of the gas. The tumor, about the size of the fist, was enucleated and removed with comparative ease. I did not allow any great loss of blood during the operation, for, as the attachments between the tumor and its capsule were broken loose, a sponge-probang was thrust up along the track of the enucleator to arrest the bleeding. When the tumor was removed, I passed several pledgets of iron-cotton into the cavity of the uterus. They were about the size of the first joint of the thumb, and each was tied with a strong thread to facilitate removal.

The day after the operation, the two lower pledgets were removed; on the second day two more; and on the third the remaining two. Vaginal carbolic washes were then freely used, and in a fortnight Mrs. H. returned home well, and soon regained all the freshness and vigor of robust health.

CASE II.—Mme. de —, of the city of Mexico, aged thirty-eight years; married at thirteen; gave birth to a child at eighteen; and had a miscarriage at twenty-four. Soon after this her health began to fail. She had nausea, and occasional vomiting; her abdomen began to enlarge, and she supposed herself pregnant again, notwithstanding the fact that she was regular. In about six months she had a violent hæmorrhage during one of her periods, and this occurred several times at intervals of five or six months. For the last four or five years the hæmorrhages have been severe and prolonged, often continuing from one menstrual epoch to the next. A year ago she consulted the eminent surgeon, Dr. Martinez del Rio, of the city of Mexico, who informed her that she had a large

intra-uterine fibroid, and he sent her to New York for operation. I saw her in June, 1873. She was anæmic, exhausted, and quite nervous from loss of blood. The os tinæ was dilated to about the size of a silver dollar, and the tumor could be seen and felt presenting at the os, but not projecting through it. The finger could be easily passed by the side of the tumor into the uterine cavity, where the tumor was felt to be firmly attached to the walls of the uterus in every direction, except anteriorly (Fig. 1). The sound could be passed into the cavity

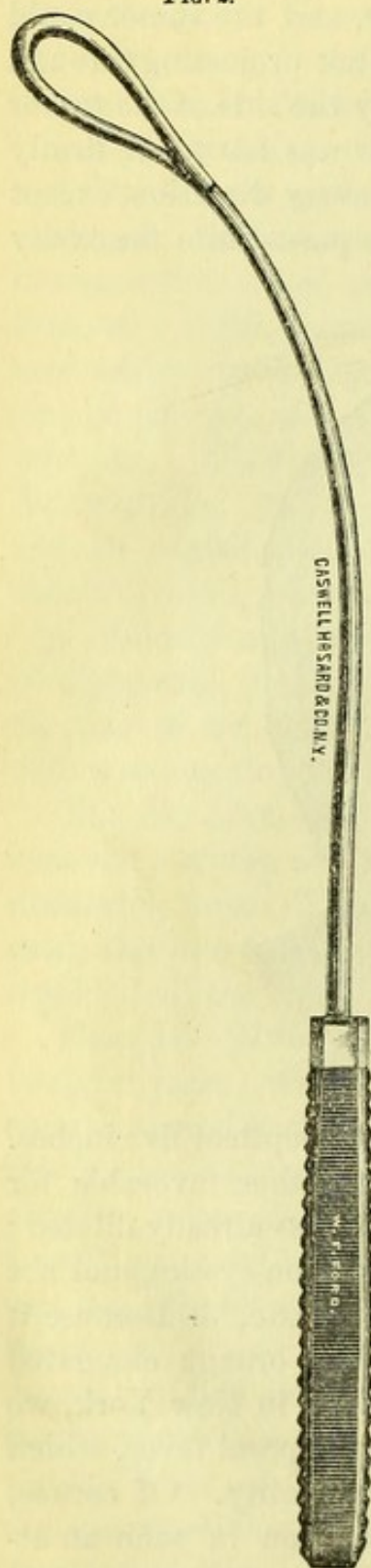
FIG. 1.



between the anterior wall and tumor to the depth of five inches. The tumor was a pure myoma, and altogether favorable for operation—favorable: 1. Because the os was already dilated; 2. Because the tumor was firm and hard (non-cystic), and not liable to give way under strong traction; and, 3. Because it was probably not larger than a good-sized orange elongated by pressure. When Mme. de — arrived in New York, we were passing through the epidemic of puerperal fever, which will long be remembered for its great mortality. Of course, I did not dare to perform such an operation in such an atmosphere, and she was sent to Newport to await my arrival

there. The operation was performed there on the 15th of August, 1873, Dr. Samuel W. Francis, Dr. Engs, and Dr.

FIG. 2.



Harry Sims, assisting. To dilate the cervix to its greatest extent, and to facilitate the removal of the tumor, five or six good-sized spongetents were passed along the cervical canal the evening before the operation. On their removal twenty hours afterward, the os was considerably larger and more yielding than before their introduction. The tumor was seized at its projecting part with the vulsellum, pulled toward the os externum, and held firmly while with scissors its capsule was incised just at its junction with the posterior and lateral portions of the cervix. By this means the capsule was opened by a semilunar incision from two and a half to three inches long. The enucleator (Fig. 2) was then thrust up between the tumor and its capsule quite to the fundus uteri, first on one side and then on the other, and then it was moved laterally so as to pass around the tumor, thus breaking up the slender connections by which it adhered to its capsule. This manœuvre finished, the tumor still firmly held by the vulsellum, the tumor-hook (Fig. 3) was passed up along the posterior surface of the tumor and hooked deeply into its substance, thus giving an immense leverage for evulsion. While forcible traction was made with this tumor-hook, the enucleator was again passed in every direction between

the tumor and its capsule. Notwithstanding all this and in

spite of the seeming non-adherence of the tumor, it could not be extracted. It was then discovered that the tumor was too large to pass through the cervix. This made it necessary to incise the cervix with scissors in four different directions quite down to the vaginal insertion. The tumor was then quickly removed, and so suddenly as to fall over the edge of the operating-table.

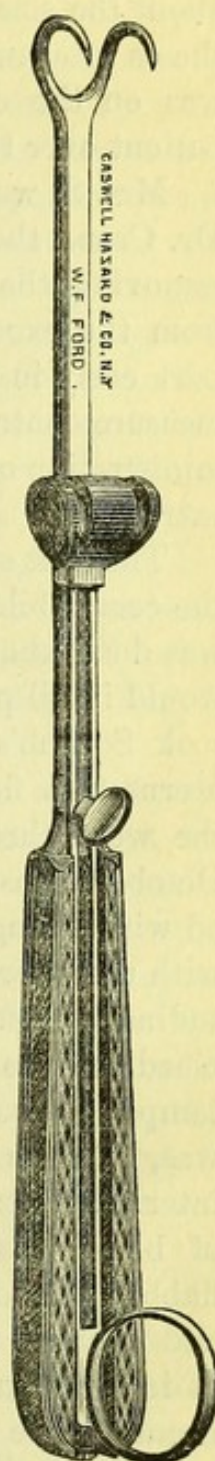
The time of the operation was twenty minutes. Pledgets of iron-cotton were passed to the fundus to arrest the hæmorrhage, which was not profuse. These were removed twenty-four hours after the operation, and the vagina was freely syringed with carbolized water, three or four times a day. In a week there was no discharge whatever from the cavity of the uterus. In a fortnight Mme. de — was able to go out, and considered herself well. In a month the four incisions made in the cervix had healed entirely, and the os presented a perfectly normal appearance.

The cases above related were easy to operate upon, because the tumors had forced their way down and dilated the os and cervix, so that the first stage of the operation had been performed by the efforts of Nature, and enucleation alone was left to the art of the surgeon.

When the os and cervix are in a normal condition, and the tumor is incarcerated wholly within the cavity of the uterus, the process of bringing it down and enucleating it is somewhat tedious—as, for example, in the following cases :

CASE III.—Mrs. S——, aged thirty-five, the mother of four children, the youngest six years old, had been subject to menorrhagia ever since the birth of the last child. Latterly she lost such large quantities of blood that her physician, Dr. John J. Crane, was obliged on several occasions to use the tampon. At last he

FIG. 3.



resorted to the sponge-tent to dilate the cervix, when he found a fibroid firmly attached to the posterior and lateral portions of the body of the uterus. It was supposed to be about the size of a large orange flattened, and wholly above the os internum, which was very much contracted. Dr. Crane was on the eve of leaving for Europe, and he turned his patient over to my care in June last.

Mrs. S. was so weak and exhausted from loss of blood that Dr. Crane thought, with me, that no time should be lost in removing the cause of the bleeding. She suffered greatly from the excessive heat of the city, and we sent her to Newport early in July. The subsequent menstruation was in a measure controlled by tampons of iron-cotton, and by the administration of Squibb's new preparation of ergot, the aqueous extract.

The first step toward getting the tumor away was to incise the cervix bilaterally quite up through the os internum. This was done about the middle of July. The next menstruation would in all probability have been as severe as ever, but she took Squibb's aq. ext. secale cornut., and the cavity of the uterus was firmly tamponed with iron-cotton. In this way she went through August and September. Soon after the October menstruation, the canal of the cervix was freely dilated with sponge-tents, the finger introduced as a guide, and, with the uterotome, the capsule of the tumor was split longitudinally from above downward for about three inches. The bleeding was profuse, but readily checked by an iron-cotton tampon passed to the fundus uteri. The November period was, like the preceding one, controlled or modified by ergot internally, and iron-cotton locally. In December the loss of blood was terrific; the uterus seemed to be large and flabby; the os and cervix were unusually large and relaxed; and to arrest the bleeding it was necessary to pass three plugs of iron-cotton, four or five inches long, and as large as the thumb, quite up to the fundus, and then to pack the vagina very firmly to hold them *in situ*. On their removal forty-eight hours afterward, the os and cervix were found dilated to nearly two inches in diameter; and on the next day the tumor was projecting to a slight extent through the os into the

vagina; and on the following day it was found to protrude farther, and to be in a sloughy condition. The patient's condition was now a very bad one. Her pulse was 146, temperature $104\frac{1}{2}^{\circ}$, and she was evidently suffering from septic poisoning. As no time was to be lost, assistance was hastily summoned. Dr. Henry D. Nicoll gave ether, and with the assistance of Dr. Crane and Dr. Harry Sims the tumor was removed in twelve minutes. The pulse and temperature each went rapidly down as soon as the semi-gangrenous mass was removed. In a few hours the patient was out of all danger. But she was so exhausted that her convalescence was tedious, and she was not able to be up and about for fully two months. The uterus was filled with iron-cotton in this case as in the preceding, which was removed on the following day. It was necessary to wash out the cavity of the uterus twice a day with a double-current catheter for a month or more after the operation. I have often seen the pulse fall eight or ten beats in the minute, and the temperature one degree, and all in ten minutes after washing out the cavity of the uterus. Mrs. S. is now well.

CASE IV.—Mrs. M., from the State of Texas, aged thirty, married ten years, sterile, had had painful menstruation for many years, and for the last five it had been very profuse. Her physician, Dr. Rufus Nott, of Texas, having exhausted the ordinary means of treatment, sent her to me last August for operation. To the touch the uterus felt to be about the size of the organ at the fourth month of pregnancy, but harder and more unyielding. The probe (gum-elastic) passed to the depth of six and a half inches. The tumor seemed to project posteriorly, and to the left, as felt through the posterior *cul-de-sac* of the vagina. Exploration of the uterus, after the use of sponge-tents, showed that its cavity was on the right, and that the tumor, which was probably as large as the foetal head, was adherent, posteriorly, anteriorly, and to the left side of the uterus; indeed, that it was adherent everywhere except along the right side of the organ. The os and cervix were of virgin form, very small, and barely admitted the passage of a No. 6 bougie. Of course, the first step was, to incise the cer-

vix bilaterally, which was done in August last. Aq. ex. secal. cor. was given during the periods, and at intervals between them.

In October the cervix was dilated with sponge-tents, and the capsule of the tumor was deeply incised for about four inches from above down toward the os internum. Very soon after this the tumor began to encroach upon the neck of the uterus and to dilate the os; and by the middle of December the os was two inches in diameter, and the tumor was presenting on a level with its margins. On January 11, 1874, the os was fully three inches in diameter, and the operation of enucleation was performed. Dr. James R. Wood, Dr. Thomas, Dr. Bixby, of Boston, Dr. Perry, Dr. Baker, Dr. Nicoll, Dr. Harry Sims, and others, were present. The capsule of the tumor was first opened at its junction with the posterior portion of the cervix, then on the left side, and around on the anterior segment of the cervix. Then the presenting portion of the tumor was grasped by the vulsellum and pulled forward, while the enucleator was pushed between the tumor and its capsule quite up to the fundus, anteriorly, laterally, and posteriorly, and then swept around the tumor to break up adhesions that might have escaped the previous thrusts of the enucleator. The tumor was large, and the cervix was not sufficiently dilated to allow it to pass easily, and I was obliged to incise the cervix with scissors in four different directions, quite down to the insertion of the vagina. When I began the operation I expected to finish it in fifteen minutes, but it required nearly an hour. After its removal, the loose shreds of capsule attached to the walls of the uterus were trimmed off with scissors, and the uterine cavity plugged with iron-cotton. Two hours after the operation there was severe hæmorrhage (which was, I suppose, from the circular artery), and it was necessary to make additional pressure with the iron-cotton tampon. These tampons were removed in forty-eight hours, and the vagina was freely washed out several times a day with carbolized water.

The tumor was the largest I have ever removed from the cavity of the uterus, and weighed two pounds less one ounce. About ten days after the operation there was a sudden dis-

charge of pus from the vagina, which for several days I supposed to be from the cavity of the uterus; but, on careful examination with a speculum, I found that it came from a pelvic abscess on the left side of the uterus which had opened into the vagina at the left border of the posterior *cul-de-sac*. I am glad to say that Mrs. M. is now convalescing.

CASE V.—A lady, forty-five years of age, supposed herself to be undergoing what is called “change of life.” She had had profuse and prolonged losses of blood for five or six years, attended at times with great pain. Prof. Loomis kindly referred her to me. The uterus, to the touch, seemed to be considerably above normal size. Its depth was four and a half inches. The os was small, and the cervix indurated. A glairy, yellowish mucus passed from the cavity of the uterus between the periods of menstruation. Dilatation of the cervical canal and digital exploration of the cavity could alone reveal the true nature of the disease. When I removed the sponge-tent I fully expected to find the cavity of the uterus filled with fungoid granulations, to be removed with the curette. But I found a fibroid, the size of a hen’s egg, and of unusual hardness, attached to the anterior wall of the uterus. The diagnosis being now complete, I determined to remove the tumor. Five or six good-sized sponge-tents were then introduced, and on the next day the operation was performed with the assistance of Dr. Nicoll and Dr. Harry Sims. The cervix was well dilated, and the tumor was brought down with hook and vulsellum, but it was impossible to draw it out of the uterus till the os was freely divided into four sections with scissors, as in the cases previously related. The operation was then finished, and the cavity of the uterus plugged with iron-cotton. This was removed on the next day, and the usual carbolyzed vaginal douches were ordered. In a week there was no abnormal discharge from the uterus. In a fortnight the patient was up and about the house, and she was soon in good health. I saw her six weeks after the operation, and the os was normal—not the slightest evidence that it had been incised in four different directions down to the insertion of the vagina. And the same thing was found in all the cases pre-

viously related where it was necessary to make these slashing incisions in the cervix.

But intra-uterine fibroids do not always wait for the tardy interference of the surgeon. They occasionally break through the investing capsule, and are forced out into the vagina by the expulsive efforts of the uterus. And, again, they may pass out so gradually and so easily through the slowly-expanding cervix that they are extruded from the uterus without seeming suffering. But, once in the vagina, their presence is often made manifest in a very disagreeable and even dangerous way.

A lady of well-known literary reputation, aged about thirty-seven, the mother of four children, the youngest eight years old, was traveling in the East in 1868. With the exception of some little menstrual disturbance, her general health was good. In Syria she necessarily rode a great deal on horseback. In Jerusalem she had profuse menstruation for the first time. In Rome she was very ill, and sent for a physician, who told her to go to Paris as soon as she could get there. On her arrival in Paris she was very seriously, dangerously ill, and she wrote to her banker to send her a physician. The banker sent his own family physician, who is very accomplished as a physician, but makes no pretensions to surgery. He found that his patient had had hæmorrhages from the uterus, that she was completely bloodless, and in a very exhausted condition. Besides this, there was a fetid discharge from the vagina, very suggestive of malignant disease. The doctor called me at once to see the case with him. Judging alone from the fætor, I did not wonder that he thought she had a cancer. On examination, I found that it came from a fibroid in the vagina, which had passed out of the womb, and was in an advanced state of decomposition. As she was rapidly dying of septic poisoning, no time was to be lost; so we at once proceeded to remove the gangrenous mass by severing its attachments from the posterior wall of the womb: and thus a valuable life was saved, that is to-day an honor to literature and to our country.

In 1869, Dr. John J. Crane asked me to see a lady with him, who had, as he supposed, an intra-uterine fibroid. The uterus was as large as at the fourth month of gestation. She

was of a consumptive family. She had hæmorrhoids and fistula in ano, and was losing large quantities of blood at each menstrual epoch, and she had a cough and some lung-trouble. She was exceedingly frail and delicate, and, as her family had all died of consumption, Dr. Crane was afraid to cure up the rectal trouble, and more particularly as one member of the family had died in consequence of operations performed on the rectum. With such a family history, I was quite as unwilling as Dr. Crane to interfere rashly with the case. So we agreed to use the sponge-tent, to operate if we found a polypus, but to do nothing if it turned out, as he expected it would, to be a fibroid. The dilatation of the cervix revealed a large fibroid broadly attached to the anterior wall of the womb. According to previous understanding, we simply injected a drachm of the tr. of iodine into the cavity of the uterus. A few hours afterward our patient was taken with violent pains—real labor-pains—that continued all night and during the following day. Late in the afternoon the pains ceased all at once, and something protruded from the vulva, which gave rise to a suspicion that Dr. Crane and myself had unwittingly been guilty of producing an abortion. Dr. Crane immediately sent for me, and on my arrival we found an enormous fibroid completely filling the vagina, and projecting from it beyond the vulva. It was firmly attached to the anterior wall of the uterus by strong fibrous bands, which were severed with great difficulty. Our patient made a rapid recovery, and now bids fair to outlive her family inheritance.

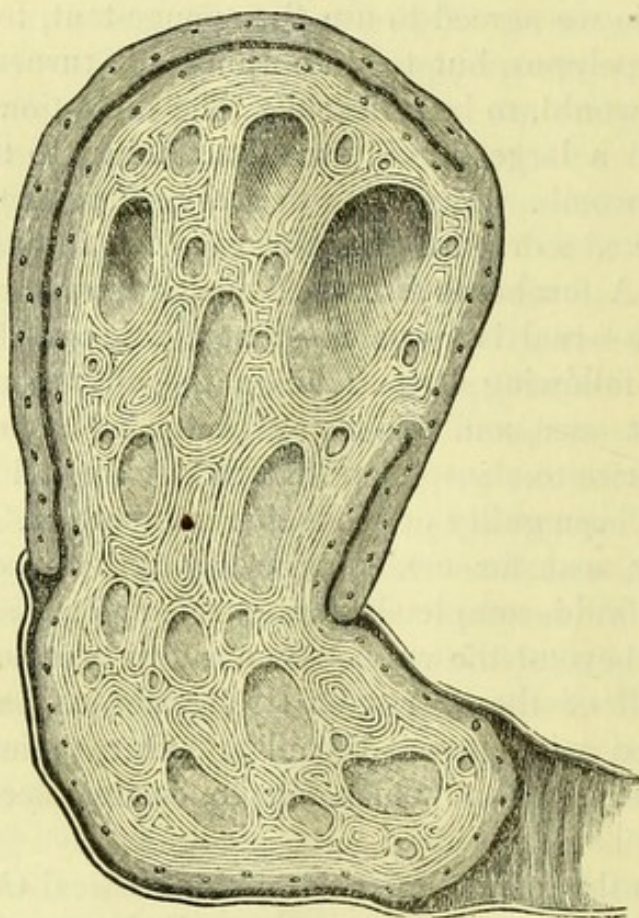
Prof. Crosby, of Bellevue Hospital Medical College, during a recent visit to Vermont, was called to see a case of menorrhagia. After an examination he told the patient that the bleeding was due to a fibroid of the uterus. He prescribed large doses of elixir of vitriol, to be taken three times a day. She took the medicine regularly for some months; the hæmorrhage was controlled; and she had regained her usual degree of health, when the doctor happened to see her again. He was so much surprised at the change effected, that he asked to examine the state of the womb. His surprise was increased when he found the

uterus restored to a normal state, and a fibroid as large as an orange lying loose in the vagina. Such cases as this are to be found, I believe, recorded in the books.

So far we have been speaking of the simple fibroid—the pure myoma of the uterus. The fibroid-cystic myoma grows to a great size, and I have removed two as large as a seven months' foetus.

CASE VI.—On December 13, 1873, Dr. James O. Smith,

FIG. 4.



of New York, sent Katharine Hogan to the Woman's Hospital, who was in a bloodless and most exhausted condition. She was forty-five years old, and a widow six years. In early life she had painful menstruation, and was sterile. For the last four or five years she had lost large quantities of blood, but the bleeding ceased in June last, since which time there has been an abundant watery mucous discharge from the vagina, which latterly became very offensive. She was perfectly blanched, and anæmic to the last degree. The

uterus was greatly enlarged and reached above the umbilicus. The vagina was filled with an elastic fibro-cystic tumor the size of the foetal head (Fig. 4). The cervix uteri was dilated to its fullest capacity, as in labor when the head has passed into the vagina and rests on the perinæum. That portion of the tumor to be seen in the vagina was of a motley grayish color, and evidently in an incipient state of gangrene, giving out a decomposed, purulent secretion of bad odor. The operation was performed on the 15th of December. The vaginal portion of the tumor was broken down with scoop and fingers and clawed out piecemeal. The hand was then passed into the uterus, and with the aid of the enucleator and scissors the whole of the mass, quite as large in bulk as a seven months' child, was removed in twelve or fifteen minutes. At one time I thought I had thrust the enucleator through the walls of the uterus into the peritoneal cavity, but, by passing the hand farther up into the cavity of the uterus, I found that it had simply entered and broken down an immense cyst. After the removal of all the solid portions of the tumor, I passed long scissors by the side of the hand and cut away all the loose fibrous shreds by which the tumor was so extensively attached to the anterior and lateral portions of the walls of the uterus. There was severe hæmorrhage, and it was necessary to hasten the operation, and to promptly tampon the uterine cavity with iron-cotton. Two sources of danger attended this operation: 1. Hæmorrhage from large venous sinuses unavoidably opened by the operation. 2. Septic poisoning from decomposing fluids retained in the cavity of the uterus afterward. To avert the first danger, the operation was necessarily rapid, and the arrest of bleeding was as necessarily prompt and efficient. To prevent the second, it was important to remove the tampons from the uterine cavity as soon as it could be safely done after the bleeding was permanently arrested, and then to freely wash out the cavity of the uterus. The whole of the vaginal tampon was removed eighteen hours after the operation, and in six hours more the uterine tampon was removed. Before this was done, the pulse was 132, and temperature $103\frac{1}{2}^{\circ}$. After its removal a thorough irrigation of the uterine cavity was effected by

passing a gum-elastic catheter to the fundus and attaching it to a Davidson syringe. A large quantity of carbolized warm water was thrown in, greatly to the comfort of the patient, and in ten minutes afterward her pulse fell 12 beats (120), and temperature one degree ($102\frac{1}{2}^{\circ}$). Dr. Baker, house-surgeon to the Woman's Hospital, had charge of the case, and he washed out the uterus with carbolized water every two hours for the subsequent twenty-four hours, when her pulse fell to 96, and temperature to $99\frac{1}{2}^{\circ}$. On the next day he injected the uterus every four hours, and on the sixth day every six hours. By this time the discharge became purulent, and he washed out about two ounces of laudable pus at each sitting.

17th Day.—The uterus is now but three and a half inches deep.

19th Day.—Has been doing well ever since operation till now. She complained of "feeling sick all over," and this afternoon she had a chill, followed by intense fever. For six hours her pulse was 160, and temperature 106° . As she had never had intermittent fever, it was inferred that the attack was pyæmic. She was put on quinine (24 grs. daily), and on washing out the uterus it was found to be full of intensely-offensive matter. As there was no return of the chill, it is altogether probable (I may say certain) that this retained matter was the sole cause of the violent constitutional disturbance. Dr. Baker fortunately discovered that the os internum was contracted, and that there was no spontaneous evacuation of the vitiated secretions from the cavity of the uterus, so he went to work to adapt a drainage-tube to secure a constant drain from the uterus. He succeeded in fitting a block-tin tube about three inches long which remained permanently in the canal of the cervix, whereby the cavity was kept constantly drained.

From this time there was no other accident. At the end of ten days, Dr. Baker found that there was no more pus coming from the uterus, and he removed the drainage-tube. His patient was soon sent home in a thriving condition and has continued well since.

I feel sure that this poor woman owes her life wholly to the untiring attention and skillful management of Dr. Baker.

But let me not lead you to think that all intra-uterine fibroids are curable by operation, or that operative procedures are without danger. While I have brought forward this formidable list of successful cases, occurring in a comparatively short space of time, it is my duty to show you the obverse of this picture.

1. In August last I operated on a case in the Woman's Hospital, which was in all particulars like the one just described. The size and character of the tumor, the attachment to the walls of the uterus, the dilatation of the cervix, the descent into the vagina, the incipient decomposition, and attendant discharge, the method of operation by breaking down the tumor and clawing it out with the hand, and the manner of arresting the subsequent hæmorrhage, were all precisely as in the case before described; and yet my patient died on the fourth day after the operation.

A *post-mortem* examination showed that the tumor had been neatly and cleanly removed. But, just where the tumor was attached to the walls of the uterus, a cyst was found holding six or eight ounces of decomposed sero-pus, the absorption of which was doubtless the septic cause of death. If this flattened cyst could have been detected, and opened at the time of operation, I would, in all probability, have had the happiness of making a different report of the case.

2. In May last, a lady came to see me from Brooklyn who had had menorrhagia for five or six years. She was forty-two years old, the mother of three children, two of them grown, the youngest six years old. The os tinæ was dilatable, and so was the cervix, which easily admitted the finger to the os internum. But this was very much contracted, and of gristly hardness. Depth of the uterus seven inches and a half. A sponge-tent revealed a fibroid, as large as the foetal head, attached to the whole anterior surface of the body of the uterus. She was under observation for a long time before I dared to do any thing radical for her relief. It was difficult to control or modify the hæmorrhages, and they exhausted her so much that I could not get her in proper condition for operation till it was time for the flow to come again, and in this way she went through the hot summer months. In October I in-

troduced sponge-tents, intending to incise the capsule, and make an effort to partially enucleate the tumor and draw it down against the os internum. I had no hope of doing more. I should have mentioned that she was a very large woman, very anæmic, and somewhat dropsical, having some œdema of the lower extremities. In this connection I am sorry to say that I neglected to analyze the urine, taking it for granted that the œdema was due to the loss of blood. On the 15th of October she was put under the influence of ether, the cervical canal being fully dilated with sponge-tents. On their removal I made incisions into the capsule of the tumor, longitudinally and transversely, just above the os internum, but the hæmorrhage was so profuse that I could do no more, and I was obliged to fill the cavity of the uterus with iron-cotton to arrest the bleeding. I have often been alarmed at the dangerous effects of chloroform, but never before by those of ether. But in this case the coma was more profound than usual, the stertor more aggravated, and the lividity of the head and face as marked as when we give nitrous-oxide gas. I cannot say that she ever fully recovered from the effects of the ether. She was somewhat incoherent during the night, and on the following morning (ten o'clock) she went into convulsions, from which she never recovered, dying in eight hours, with all the symptoms of uræmic poisoning. She did not die of the fibroid, nor of the operation, nor of loss of blood, nor of shock, but simply of uræmia, provoked or called into action by the effects of etherization.

3. One more fatal case. A sponge-tent was introduced into a narrow cervical canal to explore the cavity of the uterus, in which there was a fibroid the size of the foetal head. On the following day a chill ushered in the danger, and the patient died on the seventh day. A *post-mortem* examination revealed an abscess, which had burst into the peritoneal cavity, producing peritonitis.

4. Dr. E. H. Parker, of Poughkeepsie, sent me a patient in October, 1872, who had a uterine fibroid of enormous size. The os was very small, and the cervix was small and indurated. A sponge-tent was introduced, and in a few hours it was necessary to remove it. The most violent constitutional

disturbance was set up; my patient was exceedingly ill for six weeks, and barely escaped with her life. But the profuse hæmorrhages have ceased, and she is now enjoying a fair degree of health.

While my first series of cases demonstrates very conclusively the results to be accomplished under favorable circumstances, the second proves as conclusively the dangers that await us at every turn. Still I think we have made good progress, and I look upon the enucleation and removal of intra-uterine fibroids as one of the great achievements of modern surgery.

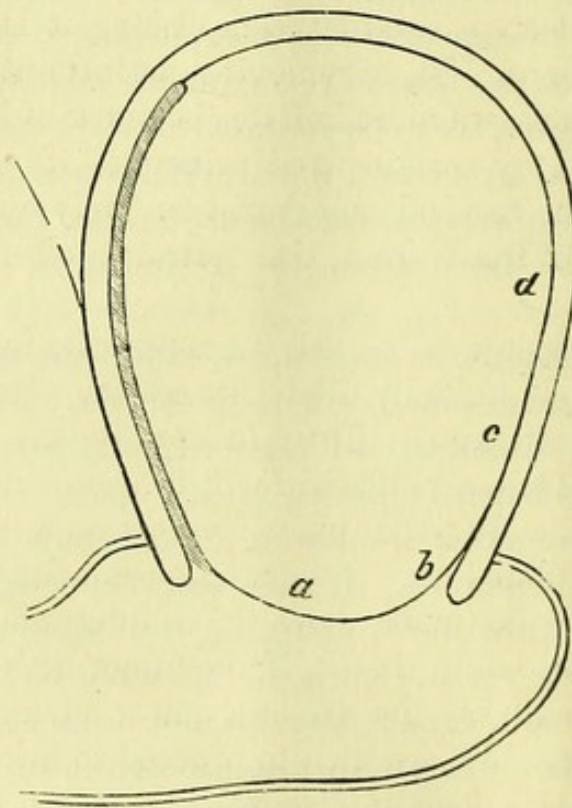
When Nature attempts the expulsion of any foreign body from the cavity of the uterus, whether it be a foetus or a fibroid, the first step toward accomplishing it is a sufficient dilatation of the os. So, in removing an intra-uterine fibroid by artificial means, we must imitate the work of Nature. We must be guided by certain fixed principles if we expect to succeed: 1. The cervical canal must be freely open. 2. The tumor must be freed from the restraint of its investing capsule.

When the capsule is incised, we expect the tumor to come slowly down and gradually dilate the cervix. Its enucleation should not be attempted till we feel pretty sure that the cervix is nearly sufficiently dilated for it to pass. And not then, till the rounded end of the tumor presents on a level with the borders of the dilated os. If we attempt enucleation with the lower portion of the tumor above the os internum, failure will be the inevitable result, that is, if the tumor be large. When the tumor is small, say the size of a nut or an egg, these rules are inapplicable. We are then to proceed to bring the tumor out at once, as was done in Case V.

To illustrate the process of enucleation, let us suppose a case. Let us suppose that we have to deal with a fibroid as large as an orange or as the fist, attached to the posterior and lateral walls of the uterus; that the anterior wall is free from attachments to the tumor; that the os is dilated to $2\frac{1}{2}$ inches or 3 inches in diameter; that the tumor is a solid myoma; and that it can be seen and felt on a level with the edges of the expanded os tinæ (Fig. 5). It will be well to introduce four, five, or six medium-sized sponge-tents, six or eight hours or more before the operation. These will soften the cervix and

dilate the canal still more, and thus facilitate the operation. With such a case as this we may promise a speedy, safe, and successful operation. And now for the process of operating: 1. The patient is to be placed in the left lateral semi-prone position, and the vagina opened with a Sims speculum. 2. The presenting portion of the tumor is to be seized at *a*, Fig. 5, with a strong vulsellum, and pulled forward. 3. The capsule of the tumor is to be opened with scissors at the place of its attachment to the posterior and lateral portions of the cervix (at *b*, Fig. 5), and here we must be sure not to dissect the capsule

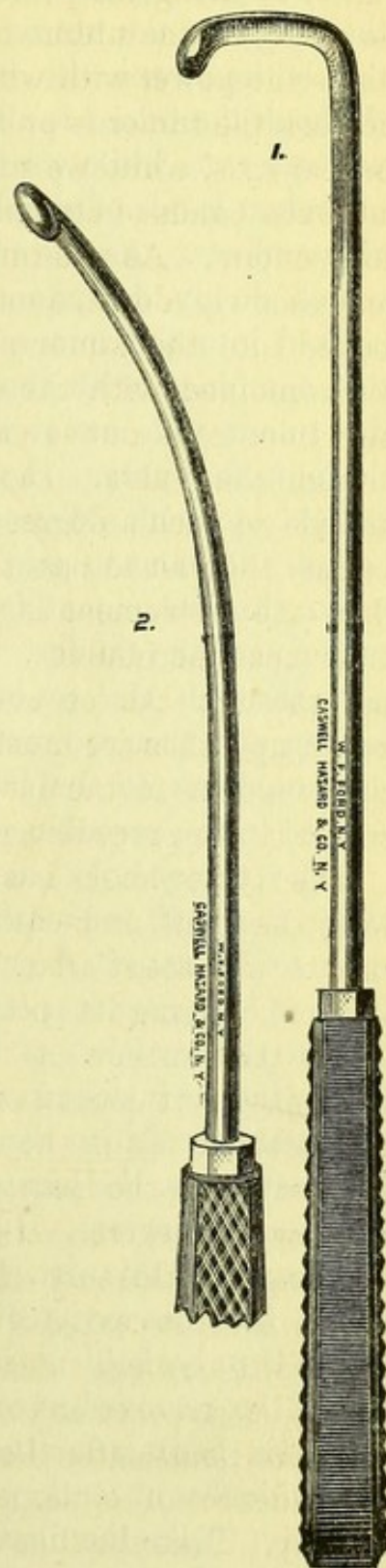
FIG. 5.



from the cervix, but to cut squarely into it, and then pass the index-finger through the opening thus made between the tumor and the capsule, which should be left attached to the walls of the uterus. The capsule should be divided all around, and in close proximity to the borders of the cervix. There is no better enucleator than the finger, but, as it cannot reach to the fundus, it is necessary to supplement it with something that can, and this brings us to the fourth stage of the operation. 4. While the tumor is firmly held and pulled forward by the hook or vulsellum, the enucleator (Fig. 2) is rapidly pushed up

between the tumor and its capsule, which remains attached to the walls of the uterus. It is carried quite to the fundus. It is then withdrawn and pushed up in another quarter, and this is repeatedly done, and when the loose cellular tissue and strong fibrous bands are thus lacerated, the instrument is carried circularly around the tumor so as to insure a complete disruption of all connecting bands between it and its capsule. Fig. 2 represents the enucleator that I formerly used. It is a steel rod twelve or fifteen inches long, looped at the end. This is to prevent all danger of running the instrument through the fundus when it is thrust up high. But in Case IV., page 11, I found it impossible to break up the strong fibrous bands with this instrument, and so I have modified it, for the better, I think, by substituting, for the loop, a blunt-hook, Fig. 6, bent at right angles with the shaft. This can be carried to the fundus with the same impunity as the other, and then in withdrawing it we can make the hook most efficient in tearing up the firmest fibrous bands. Although I have had no opportunity of trying this instrument, I am satisfied that it will prove far more powerful than the old one and quite as safe. The shaft of the instrument is slightly curved, as shown in 2, Fig. 6. When the adhesions are all satisfactorily broken up with the enucleator, we are ready for the fifth and last stage of the operation, that of the evulsion of the tumor.

FIG. 6.



5. And here, while the tumor is still forcibly pulled forward with the vulsellum, we pass a double hook (the tumor-hook), Fig. 3, up along the posterior surface of the tumor as far into the cavity of the uterus as possible, say to *c* or *d*, Fig. 5, and this is the power with which the end is to be attained. With the hook the tumor is pulled down and slightly rolled on its vertical axis, while we still use the enucleator to separate any unbroken bands of attachment that may have evaded our previous efforts. As the tumor gradually yields to traction, and comes slowly down, another hook is passed farther up and hooked into the tumor above the first, and, by traction with this, combined with the continued efforts of the enucleator, the tumor rolls out so suddenly that it seems almost to leap through the vulva. In some instances it rolls on its vertical axis to such a degree that the part attached to the fundus is really the first to pass through the vulva. This is of course when the instrument is passed up high enough to hook the tumor near the fundus. But the tumor may be too large to pass through the os even after all attachments are freely broken up; then we must resort to incision of the cervix with scissors down to the insertion of the vagina, as already described in the preceding pages.

The tumor-hook has a hard rubber shield, which slides along the shaft, and can be pushed up to the hook when we wish to liberate it from its hold, for the purpose of removing it, or of changing its point of action.

On the evulsion of the tumor, the uterus instantly contracts, just as it does in expelling the foetus. Any loose shreds of membrane felt in the uterus are to be cut off with scissors. In most cases, the hæmorrhage, after this operation, is slight. In a few it is severe. It is, at all events, safe to guard against any danger of this sort. For this purpose, I pass a plug of iron-cotton into the cavity of the uterus, and quite to the fundus, which is to be held *in situ* by a vaginal tampon. All of this should be removed as soon as possible—say in twenty-four or thirty-six hours after the operation—in less time, if there are any evidences of septic poisoning. The iron-cotton is made in this way. Take the finest purified cotton-wool,¹ such as is used

¹ This cotton-wool may be found at Caswell, Hazard & Co.'s.

by jewelers and dentists, wet it thoroughly with simple water, squeeze all the water out, and then saturate it with a mixture of liq. ferri subsulphatis and water (one part to two), press it out into layers an eighth of an inch thick, more or less, about the size of the hand; these layers are to be pressed between the hands, or on the side of the bowl or vessel containing the mixture, till they are nearly but not quite dry; and then they are to be stuffed into a large-mouthed bottle, and kept ready for use. A little of the fluid may be poured on the iron-cotton in the bottle, to insure a sufficient dampness, and then the bottle is to be securely corked. When we wish to use the iron-cotton, a sufficient number of wads is to be removed from the bottle, and each one is to be spread out into sheets, and subdivided into thinner layers, as may be needed. Formerly, I pushed the iron-cotton, tied with strong thread and rolled into little balls, up into the cavity of the uterus with forceps; but I soon found that this was not the best plan either for introduction or removal. The easiest and best method is to take a strong bit of whalebone, twelve inches long, or more, tapering to a point, smoothly polished, and slightly curved near its tapered end. If we wish to introduce a tampon into the cavity of the uterus, four, five, six, or even seven inches long, that much of the whalebone rod, previously smeared with lard or cold cream, is to be wrapped with sheets or layers of iron-cotton till the tampon is of the requisite size. It may be made as large as the thumb, or twice as large, gradually tapering to the end. It is then to be smeared with lard or cold cream, and passed up to the fundus uteri. If necessary, another smaller one, quite as long as the first, may be passed by the side of the first one. I have often introduced two or three before I felt sure of arresting the bleeding. These are to be held *in situ* by two or three wads of iron-cotton placed over the os, and secured there by a firm tampon of plain cotton, wet with water, and squeezed dry. In a few hours—ten or twelve—the vaginal tampon must be removed, and the uterine tampon should be removed in twenty-four hours, or, at the farthest, thirty-six hours.

Fig. 7 represents a tampon-screw for removing tampons, whether vaginal or uterine. Place the patient on the back;

introduce the left index-finger in the vagina; pass the screw in by the finger; twist round till it takes firm hold of a wad of cotton, which may then be pulled out. In this way every portion of the tampon may be quickly removed without fatigue or much discomfort to the patient. That portion of the tampon in close proximity (the iron-cotton) to the cervix will be removed with greater difficulty, because of its firm adhesion to the parts in contact with it. The tampon removed, the vagina must be thoroughly washed out with warm carbolized water, and, if there is any evidence of septic poisoning, the cavity of the uterus must be thoroughly cleansed by throwing carbolized warm water freely into the cavity quite to the fundus.



P. S.—While the preceding pages were in press, I received M. Péan's work¹ on the removal of uterine fibroids by gastrotomy, which throws new light on this formidable and heretofore comparatively unsuccessful operation. His peculiar method of operating, and his success, force me to modify the views I have held on this subject.

In 1843 Charles Clay, of Manchester, to whom we owe so much for ovariectomy, had the hardihood to extirpate the uterus for a fibroid tumor. Since then, according to M. Péan, this operation has been performed in England eleven times, two cured; in America eleven times, four cured; in France eighteen times, eleven cured.

The cures have been, according to this table, in England, 18 per cent.; in America, 36 per cent.; in France, 61 per cent.

Taking the operations of Koeberle and Péan separately, we

¹ Hysterotomie—de l'Ablation partielle ou totale de l'Uterus par la gastrotomie. Étude sur les Tumeurs qui peuvent nécessiter cette Opération. Par J. Péan, Ancien Prosecteur, Chirurgien des Hôpitaux de Paris; et L. Urdy, Interne des Hôpitaux de Paris, Lauréat de la Faculté de Médecine de Montpellier. Ouvrage orné de 25 figures dans le texte et de 4 planches. Paris: Adrien Delahaye, 1873.

find that Koeberle has cured four cases out of six, or $66\frac{2}{3}$ per cent., and Péan seven cases out of nine, or 78 per cent. Three of Péan's cases were intra-uterine, and might have been removed *per vias naturales*, by enucleation. The others were extra-uterine, and could not have been removed otherwise than by gastrotomy.

In England this operation has been performed successfully, once by Charles Clay, and once by Mr. Fletcher. In our own country, Dr. Burnham, Dr. Kimball, Dr. Boyd, and Dr. Storer, have each had a successful case. To these distinguished names I can now add another, that of Dr. Darby, of South Carolina.

Péan's wonderful success is due wholly to improved methods of operating.

Notwithstanding the eloquent pleading of Storer for this operation, a few years ago, the profession remained unmoved; and he left the question precisely where he found it. But the deeds of Péan, more potent than words, will surely give it a new impetus, and I have no doubt that it will before long be recognized by the profession as justifiable, and by them placed on a level with the great operation of ovariectomy.

With the teachings of Meadows and Thomas on one side, and of Koeberle and Péan on the other, I think we may well be satisfied. For, with improved methods of removing intra-uterine fibroids by enucleation, and with improved methods of removing extra-uterine fibroids by gastrotomy, a new light is suddenly shed abroad, giving us promise of still further progress in this department of surgery.

