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SUPRA-PUBIC HYSTERECTOMY BY ENUCLEATION OF TUMOR AND UTERUS, INCLUDING CERVIX.

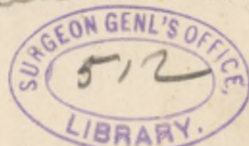
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PREFATORIAL REMARKS.

Ladies and Gentlemen:—It gives me great pleasure to meet with the profession of my adjoining State, and in the remarks I shall make I hope you will bear with me and excuse the frequency of the pronoun, I. A certain amount of ego seems necessary in discussing some questions of original work.

The lines of surgical progression converge toward the simplification of technique in operating. The simplicity of a surgical operation or instrument is the measure of its success. That all men seeking to establish some originality in operating have not the anatomical knowledge, mechanical genius, and surgical wisdom to solve the great problem of hysterectomy, is plainly evidenced in some of our recent text-books, in which illustrations can be seen of the operation in vaginal hysterectomy, with numerous forceps maintaining the broad ligaments nearly full width, so that their raw edges could infect or become adherent to intestines or omentum when the ligaments should be rounded with a strong ligature, brought down into the vagina, fixed extra-peritoneally by single clamp or ligature and the wound closed with as much precision as in celiotomy. Other recent text-books may be cast aside as back numbers in so far as original contributions in infra, and supra-pubic hysterectomy are concerned. On February 3, 1887, knowing full well that abdominal fixation of the pedicle in supra-pubic hysterectomy had at that time given the lowest rate of mortality, I decided not to operate in that way, but planned and executed an operation which in every essential feature was an

presented by the author



extirpation of almost the entire cervix. A large cautery passed three times down through the cervix in reality destroyed a large portion of the atom of cervix I had left. A rubber drainage tube was inserted for vaginal drainage. Ever since the above mentioned date, I have been making every possible effort of which I was capable to perfect a method, and I am much pleased to state that the intense desire of my heart has been gratified. In a recent discussion in the *New York Journal of Obstetrics and Gynecology*, they speak of the operation by Stimson, Krug, Baer, and myself, as if they were all operations of total ablation of the uterus. If these operations are to be considered, then the operation by Stimson, in November, 1888, was antedated by my determination to secure something better than the abdominal fixation of the pedicle, on February 3, 1887.

It is not my purpose to occupy time in discussing questions of priority in making an operation which is not applicable to all shapes and forms of tumors, although the operation including the use of my hysterectomy staff, as I demonstrated it at the International Medical Congress in Berlin, has since been made many times by Krobak, of Vienna, and numerous American operators with great satisfaction, and while I have received many congratulatory letters from distinguished operators at the rapidity and definiteness of the operation made possible by the use of the staff, I have been working for the last three years to still further simplify and perfect the operation. So in February, 1887, in answering the question which came to my mind as to what to do with the pedicle in supra-pubic hysterectomy, I decided to have none. The next problem to be solved was what to do with the broad ligaments and the ligatures on them. In many operations, I answered this question by ligating the uterine arteries and with the same ligature including as much of the broad ligament as was safe to constrict, leaving these ligatures long and carrying them down and out the vagina, using gauze or drainage tube for drainage.

I have been for several years endeavoring to reduce the number of ligatures and have made numerous dissections to determine the possibility of dispensing with the very difficult

task, at times, of securing the uterine arteries. It is amusing to see published statements by different operators, they intimating that they would always secure the uterine arteries in a certain way, as if the broad ligaments were precisely the same length and the uterine arteries equally accessible, when they know full well that the broad ligaments are rarely ever alike in length, in breadth, in thickness, or in location, and that in some instances the uterine arteries could not be ligated at all. The theme nearest to my heart for the past eight years has been the perfection of the method of removing fibroid tumors which shall *disregard the morphology* of tumor, of broad ligament, and the anomalous distribution of *uterine and ovarian arteries*, one that shall be successful in the hands of the *many* as the *few* expert operators.

Now, we are told in certain publications that the uterine arteries should be secured in a definite way. We are told in certain other publications that we can ligate the uterine arteries and arrest the growth of the tumor.

A friend, in Chicago, cuts down and ties the ovarian arteries and the uterine arteries as well, and arrests the growth of the tumor. We are told that the abdominal fixation method furnishes the largest per cent. of recoveries, hence, that should be the method. I will challenge any expert operator to show me upon this specimen (exhibiting specimen), how it would be possible to make a pedicle here that you could fix in the lower angle of the wound. I challenge any expert operator to show me how he can reach the uterine arteries when I show you that the uterus is imbedded between these two nodular masses here as I hold it. I want to ask you, how are you going to ligate the uterine arteries with this mass at the side, or ligate this one with this mass already gangrenous, as I hold it in my hand. The tumor, however, was removed and removed satisfactorily. This mass you see here is already gangrenous, and it is very peculiar.

The point I wish to make is, that in these cases the abdominal fixation method or the one in which the Philadelphia gentleman ligates the broad ligament, is impossible, nor do I believe the man lives who could have detected previous to

abdominal section that this portion of the tumor was gangrenous and that the ligation of the uterine arteries or the use of electricity would not have been the thing to do. Nothing but an abdominal section would have diagnosed the condition of that nodule, and in these cases the other methods are absolutely ruled out.

It so happened that a week ago I encountered this tumor (exhibiting specimen). It thoroughly shows the tissue change, and in connection with this very thought I wish to say that we cannot know before opening the abdomen how much of the tumor is gangrenous, or how much is not. The upper portion of this growth was in an advanced stage of gangrene, the very small pedicle having failed to nourish it. It contained a poisonous fluid at this point. The treatment of such a case by electricity, ligating the uterine or ovarian arteries, would simply have meant death to the patient. When I locate, as I think I can here, the cavity of the uterus, I will simply ask you how you would fix a pedicle here. The cervix was obliterated in the tumor. No cervix could be felt in the vagina. It was completely disorganized by the nodular masses on either side. Suppose the extra-peritoneal method does give the largest per cent. of cures, and at present has got the best per cent. of recoveries, here is a case where it could not be used at all, and are these cases to be let alone because we cannot fix the pedicle in the abdominal wound?

In a conversation with the distinguished Dr. Bantock, of London, I expressed the hope that in the near future we should be able to remove fibroid tumors with the same low rate of mortality as we now remove ovarian tumors. He expressed a doubt as to whether that could ever be accomplished, adding that the anatomical conditions were essentially different. This remark discouraged me in one direction, but encouraged me to make as thorough study as possible of all the anatomical conditions pertaining to the uterus and the development from the tissue of that organ of fibroid tumors. In looking up some seven authoritative text-books on anatomy, I find they state that the coiling or spiral arteries (which are supplied with blood from the uterine and ovarian arteries) penetrate the uterus. I

am well convinced that this statement must have come from the theorist of the closet or the book-worm of the library, and has had much to do in retarding the progress and in perfecting the technique of hysterectomy.

Sauter, of Constance, Germany, three-quarters of a century ago, removed the uterus per vaginam without clamp or ligature, practically contradicting the teachings of our modern text-books. (See article by Dr. Guido Bell.) Further, the enucleation of the cervix per vaginam was made by Langenbeck in 1813, by Recamier in 1829 and by Malgaigne at a later date. (See article by Dr. Robt. Reyburn.) Here is a nodular mass fed and nourished by a capsule—a capsule containing the venous and arterial capillaries. It is well known to every gynecic surgeon that these nodules can be peeled out of the capsule without ligating a single artery. What I have stated regarding the nourishment of this nodule by its network of capillaries, and not by the penetration of the arteries, holds true with reference to a uterus disorganized by fibroid tumor or tumors, no matter how large or how small; not only the fibroid uterus but the normal uterus; not only the uterus but its entire cervix down to the external os.

I here present a specimen (see Figure 1)—a photograph of which you may see in the *American Journal of Obstetrics and Diseases of Women* for the present month, and to my mind it marks a new era in the removal of fibroid tumors by hysterectomy for the reason that the uterine arteries were not ligated at all. I went down between the uterine arteries and the uterus. The uterine arteries were absolutely left in the pelvis of the woman, not a single ligature being used except those which tied off the ovarian arteries and a small portion of the upper border of the broad ligaments.*

Then in addition to solving the problem as to what to do with the pedicle by deciding not to have any, we now solve the problem as to what to do with the broad ligaments, and espec-

*A ligature to secure the uterine arteries will often secure a certain amount of muscular and connective tissue and is one of the possible sources of infection of the wound, hence the importance of having as few ligatures constricting tissue in this work as possible.

ially their contained uterine arteries, by simply leaving them in the pelvis of the patient. In this case I simply controlled the circulation in the ovarian artery by ligating the upper portion of the broad ligaments with a strong ligature, then cutting

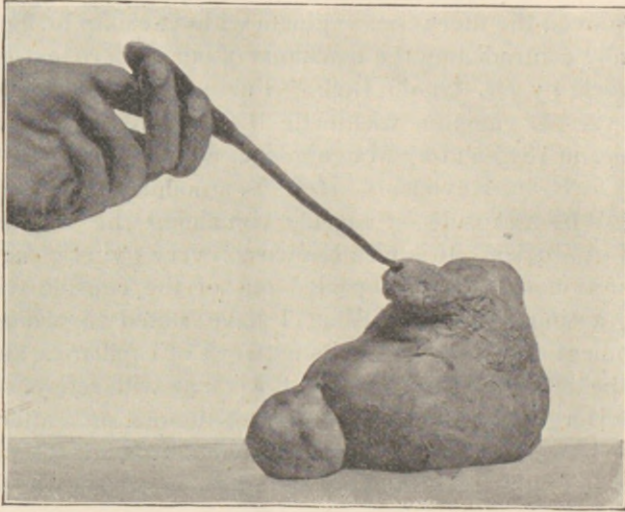


FIG. 1.

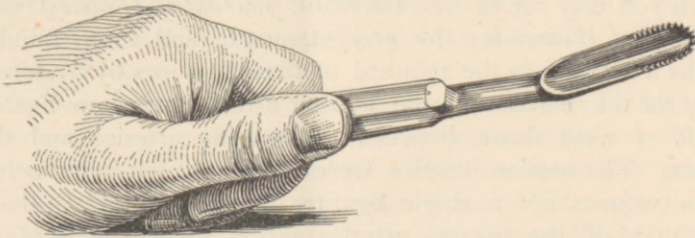


FIG. 2.

above the ligature began with this serrated gouge (see Figure 2) to peel down the broad ligaments, keeping the gouge close to the tumor, being especially careful in inter-spaces between the nodules not to puncture or tear the uterine artery or any of its branches. From time to time nicking the edges of the capsule with these button-pointed scissors, with the serrated cutting edge, I pushed it forward under the capsule, anterior

and posterior, so as to make anterior and posterior flaps. Then pushing with the serrated gouge I carefully worked around the tumor until I had reached the uterine cervix, and then proceeded with still greater caution not to cut the cervix nor its capsule, but to push it down as I now slip my cuff toward my elbow with the fingers of my right hand.

This enucleation of the lower portion of the uterus, enucleating its cervix, reminds me of Prof. Sayre's admonition when removing the head of the femur for hip-joint disease. He says, "I take this oyster knife and work my way past the trochanters, major and minor, then make sure to get beneath the periosteum close to the bone." "Then," he used to say, "d—n the anatomy, stick close to the bone," and proceeded in peeling off the periosteum until he had the entire head of the femur out of the acetabulum.

As I reached this lower part of the cervix, my hysterectomy staff was passed up the vagina by my son, Dr. Thomas B. Eastman. I then removed the entire cervix, cutting a little opening on to the staff, slipping a strip of iodoform gauze in the fenestra of the staff. When the staff was withdrawn this was brought down in the vagina, the upper portion of the gauze being packed into the pocket from which the cervix had been enucleated. The flaps which I had dissected off from the tumor and cervix were brought together by buried suture over the ligatures which had included the ovarian arteries, so that their raw ends also came into the wound. Several rows of buried suture were used, so that all raw edges made by peeling out the cervix were deeply buried so as to prevent leaking into the peritoneal cavity, the gauze being dragged down into the vagina a little each day, facilitating perfect drainage in that direction.

This operation is a *realization of the ideal*. Heretofore all of us had simply been *idealizing the real*. In my lecture delivered to the Post-graduate School of Chicago, in July, 1893, I closed with a series of conclusions. From them I quote the third, to-wit: "Where the neck of the uterus remains small, abdomen not too fat, after the ovaries and tubes have been tied off, the pedicle may be fastened in the lower angle of the

wound and give satisfactory results." To this conclusion stated at that time I have this to add: Where such anatomical condition exists, enucleation of the cervix can be done in less time than the manufacturing of the pedicle, the adjustment of the serre-nœud, or elastic ligature. Furthermore, abdominal fixation of the pedicle cannot be accomplished in all cases, nor can we know until the abdomen is opened that a given tumor is so imbedded in the pelvis that a pedicle could not be formed. Therefore, while I respect the method for the good it has done, I shall no longer sanction it because it is not applicable to all cases.

The enucleation of tumor, nodules, uterus, and cervix is a method I challenge the universe to add to or detract from. It leaves nothing to be desired by way of simple surgical technique or satisfactory results. In the last few years, I have a number of times left the greater portion of the uterine arteries to remain in the pelvis of the patient, but from the results I had I was thinking that the possibility of infection through the rich chain of lymphatics at the side of the uterus was greater in such cases than where broad ligaments were thoroughly constricted by ligature all the way down to the opening in the vagina. This led me to express, in the Chicago lecture heretofore referred to, my preference for cutting around the cervix rather than enucleating it. But carefully reflecting over the statement of Dr. Bantock, that the anatomical conditions were essentially different in fibroid tumors from what they are in ovarian cysts, I have become thoroughly convinced that we often find fault with the technique which we have used in treating the pedicle when the cause of death ought to be explained in some other way. For example, when the parietes of the abdomen are rendered thin by the pressure of an ovarian cyst, the blood supply is reduced so that all the intra-abdominal viscera are more or less anæmic. This condition is in marked contrast with the hypernutrition often present in and about the pelvis which contains a fibroid tumor. I am quite sure that deaths occur in consequence of our almost losing our heads in the determination to make the pedicle and all pertaining thereunto as perfect as possible, and neglecting to make as perfect approximation of

the abdominal incision, always large as tumor, including its peritoneum, as we should do. I have many times cut through two inches of fat to reach a fibroid tumor, and unless such a wound be thoroughly closed by three rows of sutures, the internal one being fine silk with stitches not more than the fourth of an inch apart, and then making absolute sero-serous approximation, there is danger of infecting the peritoneal cavity by the wound leaking into the abdomen. Too often we take extreme precautions to nicely adjust the outer integument when it would be better if any leakage from the wound is to occur that it shall pour outwardly rather than inwardly. Again, the more vascular condition of the peritoneal cavity and its contained viscera in cases of fibroid tumors as compared with ovarian cysts, warns us of the greater intolerance of rough manipulations, making it necessary to protect the intestines and viscera as much as possible during operation by hot sterilized towels or sponges, by temporarily bringing the wound together over the intestines with a temporary stitch or vulsella; and *above all and over all the most thorough irrigation* of the peritoneal cavity with water at not less than 110°, not only after the work has been completed, but at intervals during the work, so as to undo the harm we do to the vaso-motor nerves distributed to the pelvic and abdominal viscera. Half a dozen pitchers full of water are none too many, and if we have produced material shock as evidenced by the pulse, a few pitchers of water poured through the drainage tube and allowed to pour out again has at times, as I believe (*permit me to say, I absolutely know*), saved lives that otherwise would have been lost. The operator of to-day who seeks to do away with the "wash out" and the drainage tube on theoretical grounds is rolling the wheels of progress backwards. The skillful management of a patient during shock is of very great importance indeed. The use of opium to put the disturbed tissues at rest, as advocated by Dr. Eugene Boise, of your Society, in his recent able article on the treatment of surgical shock, has the genuine ring of surgical wisdom. The use of strychnia to keep up the tone of the nerves distributed to the intestinal tract and thereby counteract the tendency to gaseous distension of the bowels, is one of the

precious comforts to the anxious surgeon when his patient is low in shock.

CONCLUSIONS.

The following conclusions, I think, are justifiable: 1st, Where the morphology of tumor is such that abdominal fixation can be used, the enucleation of the cervix is easy and successful, requiring very little time, as no ligatures of any consequence need to be used. 2nd. In deciding between two methods equally successful and speedy, the one applicable to all cases and the other not, our preference should be for the method applicable to all cases. 3d. In this method of enucleation, great care should be taken to have the opening between the wound and vagina large enough to admit of easy removal of the gauze which has been packed into the wound for drainage. 4th. The closure of the flaps peeled off from the tumor should be very carefully made, so that perfect sero-serous approximation of the margins of the flaps may be secured, to the end that there can be no leaking from the wound into the peritoneal cavity.

When Ephraim McDowell made his first ovariectomy, the citizens surrounded his house, threatening his life, because he was about to "butcher a woman." The sheriff of the county interfered. At first they refused to listen to his pleadings for the doctor's life. Finally he struck a compromise, the mob agreeing to let the doctor alone if the woman recovered, the sheriff agreeing not to interfere with the mob if the woman died. This was a crucial test of the doctor's heroism. Other heroic surgeons for years removed ovarian tumors, allowing women to pass on to their graves if the diagnosis convinced them that it was a fibroid tumor instead of an ovarian cyst. Even the great and noble Dr. Thomas Keith, after battling with fibroid tumors, with as good a per cent. of recoveries as any one at that date, finally abandoned fibromectomy, resorting to the use of electricity, and only wished that he had back from their graves the patients that had died from his operations for fibroids. Thank God, there were others to take up the work when he got discouraged. The old adage that the qualifications of a surgeon were "the head of an Apollo, the eye of an eagle, the heart

of a lion, and the hand of a woman," is eminently true, especially to him who would seek to be successful in removing fibroid tumors. The head to plan and to meet the surprises which spring on us during such work ; an eye to see quickly the exact constriction of every ligature and adjustment of every suture ; the lion heart to forge forward in this aggressive work when our per cent of recoveries might be better if we would let fibroid tumors alone ; the nimble wit in the end of the fingers, backed by an indomitable will to skillfully and speedily perfect the adjustment of the last suture with the same precision as the first, make a combination of qualifications, suggesting that the surgical type of a man is not to be found thirteen times in a dozen.

There is no operation that I know of which so thoroughly demands that the trinity of surgery be complied with, thorough preparation of the patient, thorough operating and skillful after-treatment. As American surgeons, we have a right to be proud that no other nation leads us in the originality of methods or successful results in removing fibroid tumors. Almost every state of our Union has operators, who would venture to give a woman with a fibroid tumor the chances of life which surgery offers for her relief.

With a more thorough and perfect understanding of the essential anatomical conditions which make an abdomen containing a fibroid tumor different from one containing an ovarian cyst, with the realization of the ideal method applicable alike to all fibroid tumors regardless of their morphology, as successful in the hands of the many as the few, we can say with all sincerity that fibroid tumors can be removed with the same low rate of mortality which has placed ovariectomy among the brilliant triumphs of the century. Then shall the torch, lighted by McDowell in the midnight darkness, shine forth with resplendent glory in this brilliant noonday of abdominal surgery. The century, which in a few years will have rolled on to the eternal past, has placed in the magnificent temple of medicine many columns of surpassing beauty and grandeur, while its surgical pillars have risen high toward heaven, where, as gilded towers,

they fain would vie with the God-given sunshine in dispelling the chill and gloom of human agony.

Chirurgia's tower, thy light's resplendent blaze
Dries woman's tears, and lengthens out her days;
McDowell and Sims, of our Columbia's clime,
Began the work pushed onward high sublime.
To woman, then, these blessings shall be given,
Queen of the home, and home the type of Heaven.

Abdominal surgery is proud of her past because it is prophetic of her future. Even now in the vital present it shall stand forth unchallenged as the crowning glory of all science and of all art.

(At the close of his paper, Dr. Eastman exhibited a siphon, used with a large drainage tube with many openings, and which he calls "Jacob's well." He uses it a good deal in his abdominal work. It secures all the advantages of running water through Douglas's cul-de-sac).