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EPHRAIM McDOWELL, THE FATHER OF OVARIOTOMY.*

BY

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FELLOWS OF THE AMERICAN GYNECOLOGICAL SOCIETY:

At the close of our last meeting, one year ago, I expressed the hope that the Great Reaper would find no harvest in our midst during the intervening months, that all should enjoy the best of health and an assured return to this meeting in New York.

Alas, it is to be said with deep regret that three of our number will return no more. Dr. Edebohls died August 8, 1908; Dr. Murray, February 27, 1909, and Dr. Reamy, March 11 of this year. All contributed loyally, each in his individual sphere, to the advancement of our art through the medium of our Transactions. We shall miss their enthusiasm, their wise counsel, and their genial presence. Our estimate of their individual characters and worth will have fuller expression at another time and from those more worthy to do them justice.

As the distinguishing mark of this meeting is the commemoration of McDowell's great achievement in conclusively demonstrating that oöphorectomy was a justifiable and life-saving operation, it seems to me appropriate to refresh our memories by a brief review of the circumstances attending this great achievement.

*The president's address before the American Gynecological Society, April 20–22, 1909.

Just 100 years ago, in the year of Our Lord 1809, Ephraim McDowell, a physician and surgeon, in the little country town of Danville, Ky., incised the abdomen of a woman and removed therefrom an ovarian tumor after ligating its pedicle. How simple an act this seems to all of us to-day, and yet it was a deed that, like the first shot at Lexington, has reverberated around the world. The significance of it resides in the fact that it was the first time, in the history of man, that it had ever been done. It was an act that, in its far-reaching consequences, has immortalized McDowell, and makes us all glad to be here to-day to pay tribute to the keen surgical instincts and the courage of the man who dared.

Ovarian cysts had from the remotest time been the scourge of womankind. It was indeed a malignant disease, the victim of which, after the tumor had attained a size to be recognizable, lived from two to three years, suffered untold agonies, and died of exhaustion. Numberless autopsies had been performed upon these unfortunates. The pathology of the disease was known, and the general adhesions that were so uniformly present in the advanced stages, with frequent suppuration within the cyst—these all, combined with the supreme respect entertained for the peritoneal cavity—forbade any but the boldest entertaining any idea of attacking a case with the hope of removal and absolutely prevented any surgeon from undertaking it. The treatment as practised by an occasional, unusually bold surgeon consisted in tapping and sometimes even in making a short incision to evacuate the cyst. This, however, was rarely resorted to till the patient was almost *in extremis* and the cyst colloid, hemorrhagic, or suppurating. Iodine injections were then applied and efforts made to stop the secretion of the cyst and cause it to cicatrize. These sad and hopeless cases were on every hand, and the despair of the profession.

Like a piercing ray of sunshine out of the western sky, came the message that an unknown surgeon in the backwoods of Kentucky, had proposed, no, not proposed, but had actually done the deed that solved the problem and emancipated woman from this awful curse. Was this an angel of light? Was his inspiration a gift from Heaven? Whence came he and who was he?

Ephraim McDowell, the son of Scotch-Irish parents, was born in one of the southern tier counties of the State of Pennsylvania, November 11, 1771. When a child the family migrated to Rockbridge County, Va. There the family lived for eleven years,

when they became enthused with the idea of going west, and with their household goods made their way over the mountains. There they joined their fortunes with the early founders of the town of Danville, Ky.

The subject of our sketch received such early intellectual training as was to be secured at the home fireside and in private schools of the neighborhood. As soon as he decided to make medicine his profession he returned to their former vicinage in Virginia, and remained two or three years as a medical student in the office of a Dr. Humphrey, of Staunton. This was doubtless very desultory work, but in the year 1793, when twenty-two years of age, he went to Edinburgh, Scotland, and attended lectures at the university for one or two winters. It is interesting to know that Drs. Hosack and Davadge, of New York, were also students in Edinburgh at this time. We are told that in addition to the university course, McDowell listened to the private lectures of John Bell, the most able, eloquent, and gifted of Scotch surgeons of that day. Bell at that time was greatly interested in the diseases of the ovary, and in his impressive manner painted in startling colors the inevitable death to which the victims of ovarian cysts were doomed. It is said that Bell even suggested the hope that success might attend an operation for removal.

There seems to have been quite a stirring of thought in this direction at that time in the minds of several prominent surgeons. In this they were simply emphasizing the suggestions made years before by Wm. Hunter, John Hunter, and others. William Hunter is quoted as saying: "It has been proposed, indeed by modern surgeons deservedly of first reputation, to attempt a radical cure by incision and suppuration; and by the excision of the cyst. I am of opinion that excision can hardly be attempted; and that incision and suppuration will be found by experience to be an operation that cannot be recommended but under very particular circumstances. The trocar is almost the only palliative." So far as I can discover this is the first record of any suggestion of the possibility of excising the cyst, and then only in the most discouraging terms. This was in 1757.

In 1786 John Hunter said: "If taken in their incipient stage hydatids of the ovary might be taken out, as they generally render life disagreeable for a year or two and kill in the end. There is no reason why women should not bear spaying as well

as other animals." The possibility of extirpating the diseased ovary was also discussed theoretically in lectures before the Royal Academy of Surgery of Paris as early as 1774 by Delaporte and Morand.

Whether or not John Bell referred in his lectures to these various suggestions we know not nor have we any intimation from McDowell that he acted upon any hint or suggestion that he received while abroad. About the middle of the last century medical literature was so thoroughly ransacked and scrutinized in the attempt by enthusiasts of England, Germany, and France to gain—each for his own country—the honor of being first in this field that the slightest passing suggestions have been brought into the limelight and made to do duty in claiming honors in this connection. So that much that is common information now may have been entirely unknown at that time even to the most prominent surgeons and teachers.

It is natural to infer, however, that McDowell received his inspiration for the operation from John Bell, and when the proper circumstances for its application presented, he rose to the occasion and boldly applied the remedy. The courage required to meet this emergency can only be appreciated when we reflect that anesthesia was unknown; that hypodermic needles for administration of stimulants or morphine as the case required had not been invented. That saline injections for relief of shock were still in the future. That the operator had no skilled assistant to aid in the work, and the trained nurse was as yet untrained. Fortunately for the operator's steadiness of nerve, sepsis and asepsis were not to be reckoned with, for they, too, were unknown. So he had no qualms of conscience on that score. His report on the case is simple, direct, and convincing. He says: "In December, 1809, I was called to see a Mrs. Crawford, who had for several months thought herself pregnant. She was affl cted with pains similar to labor pains, from which she could find no relief. So strong was the presumption of her being in the last stage of pregnancy, that two physicians, who were consulted on her case, requested my aid in delivering her. The abdomen was considerably enlarged, and had the appearance of pregnancy, though the inclination of the tumor was to one side, admitting of an easy removal to the other. Upon examination *per vaginam*, I found nothing in the uterus; which induced the conclusion that it must be an enlarged ovarium. Having never seen so large a substance extracted, nor heard of an attempt, or success attending any operation

such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment, which I proposed to perform if she would come to Danville (the town where I lived), a distance of sixty miles from her place of residence. This appeared almost impracticable by any, even the most favorable conveyance, though she performed the journey in a few days on horseback. With the assistance of my nephew and colleague, James McDowell, M. D., I commenced the operation, which was concluded as follows: Having placed her on a table of ordinary height, on her back, and removed all her dressing which might in any way impede the operation, I made an incision about three inches from the musculus rectus abdominis, on the left side, continuing the same nine inches in length, parallel with the fibers of the above-named muscle extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribe to the resting of the tumor on the horn of the saddle during the journey. The tumor then appeared full in view, but was so large that we could not take it away entire. We put a strong ligature around the Fallopian tube near to the uterus; we then cut open the tumor, which was the ovarium and fimbrious part of the Fallopian tube very much enlarged. We took out fifteen pounds of dirty, gelatinous-looking substance; after which we cut through the Fallopian tube and extracted the sac, which weighed seven pounds and a half. As soon as the external opening was made, the intestines rushed out upon the table, and so completely was the abdomen filled by the tumor, that they could not be replaced during the operation, which was terminated in about twenty-five minutes. We then turned her upon her left side so as to permit the blood to escape, after which we closed the external opening with the interrupted suture, leaving out at the lower end of the incision the ligature which surrounded the Fallopian tube. Between every two stitches we put a strip of adhesive plaster, which, by keeping the parts in contact, hastened the healing of the incision. We then applied the usual dressing, put her to bed, and prescribed a strict observance of the antiphlogistic regimen. In five days I visited her, and much to my astonishment found her engaged in making up her bed. I gave her particular caution for the future, and in twenty-five days she returned home as she came, in good health, which she continues to enjoy."

From a later note we learn Mrs. Crawford lived till March 30, 1841, a period of thirty years, when she died in the seventy-

ninth year of her age. All glory to the stout-hearted woman who submitted to this experiment in the face of such terrific suffering and jeopardy.

The account of the operation as given above is the one that McDowell prepared, and in connection with two other cases, all of which were successful, he sent to Philadelphia for publication in the year 1816; seven years after the first operation. This report was published in a Philadelphia medical journal called *The Eclectic Repertory and Analytic Review*, October, 1816. The date of the first case was December, 1809; the second, 1813, and the third, May, 1816. The first case was reported quite fully, the other two were not described in detail, the technic being omitted, except in so far as certain variations were made to meet special indications. It is natural to infer, therefore, that with the exception of these variations the technic of the first case was followed.

The statement that this operation had actually been performed seemed so incredible that it is no wonder that surgeons and medical editors searched the records of the cases for reasons to justify their incredulity. In the *Eclectic Repertory*, 1817, one year after McDowell's report, Dr. Ezra Michener, of Philadelphia, reported a "case of diseased ovarium." The patient died without operation, and at autopsy the "uterus and tumor were found so intimately united as to render it impossible to distinguish or separate them." Dr. James, of Philadelphia, a distinguished teacher of obstetrics, was mentioned as having been in consultation. After reporting his case, the author, Dr. Michener, proceeds to comment upon McDowell's operation as follows: "It is a wish to give you a counterpart of Dr. McDowell's paper that induces me to offer this account for your disposal. While his hand holds forth the successful blade as an ensign for the bold and dexterous surgeon, may I point to the dangers which lurk under the obscure and delusive indications of this species of disease. It is much to be regretted that cases so interesting to the community as those of Dr. McDowell, and as novel as interesting, should come before the public in such a manner as to frustrate the intention of becoming useful. Far be it from me to arraign the probity of Dr. McDowell. If the cases he relates are—as I sincerely hope them to be—correctly stated, no remarks of mine can detract from his merit."

Just one year later, 1818, in the same medical journal, Dr. Henderson, of Washington, published an article entitled, "On Ovarian Diseases and Abdominal Steatoma." The case reported

was diagnosed as a tumor not connected with the uterus or the bladder. The tumor was tapped, but no fluid was found and death followed three weeks later. At autopsy the tumor was found to be a steatoma of the deep layers of the abdominal wall, projecting into the abdominal cavity, and weighed about nine pounds. A small dermoid cyst of the right ovary was also discovered. At the close of this report the author comments upon Dr. Michener's criticisms of Dr. McDowell's operation, closing with the remark that "Dr. Michener will probably live to see the time when he will with pleasure asknowledge the inapplicability of the views held out in his paper to the power of the surgeon's discernment and the effect of his knife."

This article of Dr. Henderson's came to the notice of Dr. McDowell. He thereupon indicted a letter to Dr. James, the consultant in Dr. Michener's case, replying to the latter's criticisms. The date of publication of this letter is September, 1819. He says: "Since my former communication I have twice performed the operation of excision, which cases are subjoined." The length of incision in McDowell's first case was stated in the report at nine inches, but in the letter he says: "As I did not actually measure the incision it would perhaps have been better to have said an incision was made about three inches to the left of the musculus rectus, extending from the margin of the ribs to the os pubis on a woman whose abdomen was distended by a tumor to an enormous size."

The idea of the patient's abdomen having been abraded by the horn of the side saddle had been ridiculed, and to this McDowell made answer.

The statement that McDowell found his patient making her bed on the fifth day after the operation had also been a subject of comment. To this he retorted: "The doctor's skepticism alone appears to have carried him through the statement, and I am surprised that he will even admit the fact of her returning home on horseback in five and twenty days after the operation, a distance of seventy miles, and in the depth of winter." The statement that the patient was up and making her bed on the fifth day after the operation, while passing the credulity of surgeons of his time, is quite comprehensible in these later days of early getting up after operation.

In replying to the alleged meagerness of his report he adds: "I thought my statement sufficiently explicit to warrant any surgeon's performing the operation when necessary, without

hazarding the odium of making an experiment, and I think my description of the mode of operating and of the anatomy of the parts concerned clear enough to enable any anatomist possessing the judgment requisite for a surgeon to operate with safety. I hope no operator of any other description may ever attempt it. It is my most ardent wish that this operation may remain, to the mechanical surgeon, forever incomprehensible."

Upon this *prima facia* evidence rests the claim of Ephraim McDowell to the honor of being the first ovariotomist. Dr. Gross, of Philadelphia, in investigating this subject many years ago secured the reports of three more cases which McDowell had written in letters to various surgeons who had sent him cases for operation. Of the eight cases reported by McDowell (four in white and four in negro women), five were completed, three were unfinished but recovered. Of the five completed operations, two white, three black) one, a negro, died. Mortality of completed operations, 20 per cent.

In addition to this we have the testimony of his nephew, Dr. Wm. A. McDowell, who was for five years his pupil and assistant and two years his partner, who tells us that his uncle performed ovariotomy thirteen times, with eight recoveries. This statement is also attested by Dr. Allen C. Smith, an assistant of McDowell and himself a successful ovariotomist during his subsequent career.

The second ovariotomist in this country, and indeed in the world, was Dr. Nathan Smith, then professor of surgery in Yale College, New Haven, Conn. This operation was as truly original as Dr. McDowell's, Dr. Smith being at the time entirely unaware of Dr. McDowell's work. It was performed at Norwich, Vermont, July 5, 1821, and was reported in the *American Medical Record*, Philadelphia, for June, 1822, also in the *Edinburgh Medical and Surgical Journal*, for October, 1822. Dr. Smith's technic differed in several details from that of McDowell's first operation: He made a short incision below the umbilicus, only three inches long, tapped the cyst and drew out the sac. The omentum being adherent, it was detached and two arteries in it tied with leather ligatures (narrow strips cut from a kid glove). Two arteries in the pedicle were also tied, the latter being dropped into the peritoneal cavity and the incision closed. The cyst contained eight pints of fluid. Convalescence was smooth and uneventful. The patient sat up and walked at the end of three weeks.

Dr. Smith states that he was led to perform the above oper-

ation from the fear the patient had of speedy death from the growth of the tumor and from the fact that he had learned from an autopsy and from several specimens of dropsical ovaries in his possession that adhesions were absent or so slight as to be of no practical consequence in an operation for removal. This experience differed from most authorities of his day. He further states that, "The operation persued in the above case is the same as I have described to my pupils in several of my last courses of lectures on surgery. The result has justified my previous opinions."

Upon this point he was obliged to change his opinion for in the same publication and on the same authority, Prof. Smith is credited with two other cases "in which he attempted the operation, but was compelled to desist." The first case referred to was that of a fibrous growth of the uterus, and in the second the tumor, doubtless an ovarian cyst, completely filling the abdominal cavity. The latter patient had been tapped two or three times previously. The adhesions were found so extensive and firm that the operation had to be abandoned. In both instances recovery followed these unfinished operations.

America is entitled to the distinction, therefore, not only of having two originators of ovariotomy, one with the long incision and one with short, but she had also two educational centers directing the attention of the profession thereto. Philadelphia, at the time McDowell sent there the reports of his five operations for removal of diseased ovaries to be published in the *Eclectic Reportory*, was the greatest center of medical teaching in this country. The medical journal referred to was as respectable and widely known as any other then published in the United States. Not only had the reports of these unique cases in all their details been brought to the notice of the large number of readers of this periodical, both at home and abroad, at the date in question; but there had also appeared from time to time, in the subsequent issues of this journal, sharp criticisms of the teachings of McDowell, as well as articles in defense of them, not only by himself, but by others. All this, therefore, tended to prove beyond question that there was an extended knowledge among intelligent and well-informed physicians at that period of the great triumphs of the Kentucky surgeon. Beside this, Prof. James, then one of the ablest teachers of obstetrics and diseases of women in this country (to whom Dr. McDowell directly addressed his paper, September, 1819, accompanying it

with a dignified and convincing defense of the principles of his operation), availed himself of every opportunity to make known to his large classes the character of these brilliant operations and the influence they would have upon the profession.

In New Haven, Conn., we find another center of medical teaching as well as educational and classical instruction. Dr. Nathan Smith was directing his attention and that of his students to the same subject.

A most interesting feature in the establishment of the authenticity of McDowell's cases now presents itself. In recognition of the obligation McDowell felt to his former teacher, John Bell, of Edinburgh, for his inspiration in undertaking his first experiment, as well as a possible feeling of pride in the pleasure his former teacher would experience in knowing that one of his pupils had accomplished the deed that he had pictured as an ideal procedure, he sent a duplicate copy of the report of his cases to him at Edinburgh. It so happened that John Bell at this time had gone to the continent for his health, where he remained until his death. The manuscript therefore fell into the hands of Mr. Lizars, who had charge of Mr. Bell's patients and professional correspondence. McDowell's report of his first three cases intended for Mr. Bell, slumbered in Mr. Lizars' possession for more than seven years, when Mr. Lizars published a case of attempted ovariotomy by himself and, as a justification of his bold undertaking, appended thereto McDowell's report; this was in 1824. Lizars had mistaken a phantom tumor with thick abdominal walls for an ovarian cyst; had incised the abdomen from two inches below the ensiform cartilage to the crista of the os pubis. He found no tumor and closed the incision.

Peaslee's comment upon this reads: "In such circumstances Dr. McDowell's report of three cases afforded a precedent for Lizars' operation, if it did not indorse his diagnosis."

Mr. Lizars does not refer to the case of Nathan Smith, performed at Norwich, Vt., on July 5, 1821, and reported two years previously in the same journal in which his article now appeared, except to remark that Dr. Smith, of Connecticut, had lately performed the operation successfully.*

This appearance of McDowell's report came as a startling piece of intelligence to the professional world of Great Britain. It was received there also with great incredulity, the editor of the *Medical Chirurgical Review*, January, 1825, remarking: "We

* *Edinburgh Medical and Surgical Journal*, October, 1822.

cannot bring ourselves to credit the statement. *Credat judæus non ego.*" He also adds in a succeeding number of his journal: "In despite of all that has been written respecting this cruel operation, we entirely disbelieve that it has ever been performed with success, nor do we think it ever will." This same spirit of opposition had already declared itself in the very journal, *The Eclectic Repertory*, of Philadelphia, in which McDowell first published his report, as I have already narrated.

Those familiar with the history of the great discoveries in medical science that have set the mile-stones of progress in its career are not surprised to find the same spirit of conservatism (to characterize it by no milder term) denouncing the operation of ovariotomy and vilifying the operator. How strange it all seems! This was true of Harvey, Jenner, Paré, Oliver Wendel Holmes, and all the rest.

McDowell in his first five cases established about all the distinctive and important principles in the technic of oöphorectomy. Except in the one particular of aseptic precautions, it is surprising how minutely the ovariotomist even of to-day in dealing with large cysts follows him in the successive steps of the operation, and how few improvements have been made.

1. In his first case and five others he made offhand, his sweeping long incision laying open the abdomen from the border of the ribs to the spine of the pubis, sometimes at the outer border of the rectus, sometimes in the median line. In two cases, the third and the sixth, he used the short median incision below the umbilicus.

2. The principle of regarding the short incision as exploratory, inserting one finger or hand for exploration in diagnosis, holding in reserve the practicability of enlarging the incision and completing the operation or puncturing and draining the cyst when removal was impossible.

3. The practice of avoiding the umbilicus in extending the incision, going around it to the right or left.

4. The practice of turning the patient upon her side to prevent the fluid getting into the peritoneal cavity or emptying it when it had escaped into it.

5. The principle of transfixing the tissue of the pedicle with the ligature to prevent slipping. This he applied after the slipping of the ligature in one of his cases.

6. The closure of the wound with interrupted sutures together with broad adhesive strips and the application of compress and abdominal binder.

To McDowell, therefore, we are indebted not only for demonstrating the possibility of excising an ovarian tumor, but also for exhibiting at his first operation an almost perfect technic. In reporting his cases he said almost nothing, however, about the after-treatment. Undoubtedly it was this omission that gave occasion for the doubts and criticisms that were showered upon him. Prompted doubtless by a desire to avoid this unfortunate experience, his early successors especially Lizars, in 1824, and Charles Clay, in 1843, elaborated the after-treatment to the fullest extent. Indeed, the thoroughness with which the early operators thought out the minute details of their operations and carried them into execution is indicative of their keen surgical sense and their familiarity with the exigencies of surgical work.

It is interesting to note how carefully they considered and anticipated all the questions that even during the last quarter of a century we have been contending about. Where, indeed, is to be found a more pointed application of the saying, that the vaunted discoveries of the present were only the commonplaces of the past? For instance, Clay discusses the preliminary treatment of the bowels, recommending compound jalap powder and inspissated ox-gall. Lizars advocated a temperature of 80° for the operating-room. Clay, 68° to 70°. They both used and praised the long incision, from the border of the ribs to the pubis. Clay wrapped the intestines in a cloth dipped in a solution of lard and hot water, emphasizing the importance of handling them as little as possible. He thought the adhesions were severed best by cutting rather than tearing with the fingers, insisted that as little opium and stimulants should be given as possible, and even used the rectal tube for the escape of flatus. I remember distinctly when this last device—the rectal tube—was introduced into the Woman's Hospital as a most happy and novel contrivance during my term of service as interne. A few years since a surgeon out West suggested marking the abdomen with lines of nitrate of silver across the line of incision in cases of greatly distended abdomen, so that the same parts might be brought into apposition in suturing the wound subsequently. And yet this device was used and recommended by Lizars. Clay took the advanced position that ovarian tumors should not be tapped because it produced adhesions and so complicated subsequent operations.

The remarkable feature of the after-care of their patients was bleeding. It is interesting to note what unbounded faith the

early operators had in it. Lizars applied it in a most heroic manner in his after-treatment of ovariotomy. He says, in describing this first case: "Six hours after the operation, bled her to syncope, which occurred when 11 ounces of blood were extracted. Next morning skin felt hot, tongue was white and a little crusted, so I repeated the bleeding to syncope which occured when 13 ounces of blood were abstracted. After the bleeding she felt easier and by evening the symptoms had disappeared. Toast, water, tea, coffee, and warm gruels were administered, also five drops of opium which stayed on her stomach. Second morning felt much better; breathing natural, pulse 90 and soft, skin cool and soft, tongue white and moist, the bladder still required the catheter. Conditions continued favorable until the evening of the third day. Wound dressed and found in good condition. At 8 P. M. pain in right iliac region darting upward, pulse 108° full and strong, skin hot and some thirst. I therefore bled her to fainting which followed after sixteen ounces were abstracted. In an hour afterward a domestic enema was given, and lastly the sedative of opium; enema operated well and she fell asleep."

His third case died, although she had been bled to syncope three times on the third and fourth days. Autopsy showed adhesions throughout the abdomen, the Fallopian tube turgid and red in color. "From these appearances and the symptoms after the operation," the author says, "I am of the opinion that blood-letting should have been had recourse to on the evening of the day of the operation. Her emaciated frame and enfeebled constitution deterred us from acting with the same promptitude and vigor as in the other cases." He draws the following and impressive lesson: "In every case of this operation bleeding should be performed whenever the pulse rallies after the operation, and repeated again and again as may appear prudent and necessary."

In the next case, the fourth, he puts this maxim into practice: "Although the pulse was 64 and soft, within a few hours after the operation, 20 ounces of blood were taken from the arm for 'prudential motives.' "

The notes continue: At 7 P. M., first day, pulse 86, full and hard; bled to 35 ounces, after which she felt much relieved. Eight P. M., pulse 108, soft and full, skin moist, tongue natural, 20 ounces of blood taken from the arm.

If patients could survive such treatment it is not to be wondered

at that Lizars in his paper, published in 1824, set forth the following conclusions: "From these cases there is little danger to apprehend in the laying open the abdominal cavity; that in diseased ovarium, extrauterine conceptions with deformity of the pelvis preventing embryulcia, aneurysm of the common or internal iliac arteries or of the aorta, volvulus, internal hernia, cancer of the uterus, and foreign bodies in the stomach threatening death, we should have recourse early to gastrotomy. Delay in such cases is more dangerous than operation."

Time does not permit me to dwell upon the courageous and noble work of our own countrymen, John and Washington L. Atlee, of Kimball, and of Peaslee, all of whom, in the face of bitterest opposition and denunciation on the part of their professional brethren, stood by their surgical convictions, responded to the call of suffering women, and compelled the acceptance of oöphorectomy as a justifiable operation. They were valiant knights as ever drew blade in defense of right and justice.

The dominant characters in this great drama, however, were Ephraim McDowell, of Danville, and Charles Clay, of Manchester, England. From the brain and hand of McDowell the operative technic sprang forth almost in its perfection, and the painstaking after-treatment of Clay elaborated it into a complete procedure.

And what shall we say of this procedure? What has it done and what is it doing for womankind? Peaslee says that it excels all other strictly surgical operations in its life-prolonging results to women. In 1870 he made a critical analysis of all recorded cases of ovariotomy up to that date and, basing his calculation upon the known law of the length of life of a woman who has an ovarian tumor uninterfered with, and the probability of the longevity of healthy women of corresponding age according to the most approved tables of life insurance, demonstrated that in the United States and Great Britain alone ovariotomy had during the preceding thirty years directly contributed more than thirty thousand years of active life to women; all of which would have been lost had ovariotomy never been performed, to say nothing of saving her more than a thousand years of untold suffering. If within the short space of thirty years, and that, too, in the early developmental stage of the operation, it gave to the world thirty thousand years of sweet uplifting influence of woman, who can estimate the æons of years that have been added to longevity and the influence of woman since that date?

Ovariotomy has been termed "an operation without its parallel;" "an operation fraught with happiness." Koeberle, of Strasburg, said of it: "it is one of the most convincing titles to glory of our surgical epoch." Surely, in its far-reaching potentiality it ranks second only to one other great discovery which our country has given to surgery and the world, viz.: anesthesia, and together with listerism—asepsis—forms the trinity of modern surgical achievement.

And now, as a closing word, what shall we say of Ephraim McDowell? We find that he was an amiable, simple-hearted man, free from wordly ambition, in love with his profession and devoted to his work. He had been well grounded in the broad principles of surgery as understood in his day, and, being thrown upon his own resources in his life on the frontier, he unhestitatingly applied them in whatever way the individual case demanded. The characteristic of the man's life was its simplicity, and therein was revealed his greatness. Jackson says: "His practice extended in every direction, persons came to him for treatment from all neighboring States, and he frequently took horseback journeys for hundreds of miles. We may say that he stood *facile princeps* in surgery west of the Allegahnies. He is to be accepted as being in the habit of performing every surgical operation then taught in science." He had the reputation of being extremely successful in lithotomy as well as in strangulated hernia. What more natural, then, when Mrs. Crawford expressed her willingness to undergo what he represented to her as an experiment, without apparent consciousness of doing anything more than relieving the case in hand, he applied the universal principle of extirpating the seat of disease at its source? It proved life-saving, and lo, a great and new epoch of surgery was inaugurated.

A hundred years—a century—have rolled by since that day and yet the luster of McDowell's achievement has grown steadily brighter to the present day. It was a fertile seed which, planted in appropriate soil, has risen to a mighty tree. It has manifold branches and has borne abundant fruit.

McDowell was born November 11, 1771, and died January 25, 1830, in the fifty-ninth year of his age.

Peace be to his ashes and glory to his name.

McDowell did not live to see his operation adopted as a recognized surgical procedure, but he did have the satisfaction of knowing that Dr. Johnson, the editor of the *Medico-Chirurgical Review*, who had declared in 1825 that he did not believe the operation

had ever been done successfully and probably never would, the following year published in the same journal a recantation, in which he said: "A back settlement of America—Kentucky—has beaten the mother country, nay Europe itself with all the boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with extraction of diseased ovaries. In the second volume of this series we adverted to the cases of McDowell, of Kentucky, published by Lizars, of Edinburgh, and expressed ourselves as skeptical respecting their authenticity. Dr. Coates, however, has now given us much more cause to wonder at the success of Dr. McDowell, for it appears that out of five cases operated on in Kentucky by McDowell, four recovered after the operation and only one died. There were circumstances in the narratives of the first three cases that caused misgivings in our minds for which uncharitableness we ask pardon of God and Dr. McDowell, of Danville."

A broad and searching examination of all the claims put forward by aspirants, or their friends, to the honor of antedating McDowell has proved them, one and all, entirely groundless. The wide dissemination of the facts upon which this decision rests, and the ripening influence of time have brought the professional and scientific world into accord upon this subject, so that I think I am safe in saying that in this centennial year McDowell is universally recognized throughout the world as the originator of the operation and entitled to be proclaimed the Father of Ovariotomy.

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