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SURGEON OF THE WILDERNESS—EPHRAIM McDOWELL¹

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IN a backwoods settlement in the wilderness, now the famed center of Kentucky's unrivaled blue-grass beauty, there was enacted a surgical drama of transcendent import. It was the first ovariectomy in the history of mankind and was performed by Ephraim McDowell. How did it happen? Let his original publication describe the *mise en scene*:

THREE CASES OF EXTIRPATION OF DISEASED OVARIA

By Ephraim McDowell, M.D. of Danville, Kentucky.

In December, 1809, I was called to see a Mrs. Crawford, who had for several months thought herself pregnant. She was affected with pains similar to labour 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 promised to perform if she would come to Danville (the town where I live), a distance of sixty miles from her place of residence. This appeared almost impracticable by any, even the most favourable conveyance, though she performed the journey in a few days on horseback.

What manner of man was he to propose to do this wondrous thing? Who was this angel of light? Whence came he? Who were his forebears?

McDowell's ancestors were the sturdy Scotch presbyters who emigrated from Argyle to the north of Ireland during Cromwell's Protectorate. The great grandfather Ephraim for whom the illustrious surgeon was named, showing his origin from the Covenanters, fought with them against Charles I in the English Rebellion, and later immigrated to Pennsylvania. Thence his grandfather moved to the Shenandoah Valley near the historic town of Lexington. Rockbridge County, Virginia, west of the Alleghanies, was a vital part of Virginia's strength in the Revolutionary War and in the unfortunate Civil War. There the great grandfather, Ephraim, was buried after rounding out a century. His grandfather was ambuscaded by the Indians on a Christmas day. His father fought in the French and Indian wars and was a colonel in the Revolution, his regiment seeing service in the campaign against Cornwallis. In

the convention at Williamsburg he was one of a group who memorialized Congress to declare independence. Over the Wilderness Road across the mountains, this patriot and forebear came to the district of Kentucky and served as a judge in the first court when it was removed to Danville and was in Kentucky's first constitutional convention.

Kentucky is a child of Virginia. Pioneers under George Rogers Clark, parties of hunters, and company agents, and settlers moved through the Cumberland Gap, which was found in 1750 at the present junction of Virginia, Tennessee, and Kentucky. It was the trail the Cherokees and Shawnees had made leading northward, called The Wilderness Trail. Along this path the race for the exploitation of the New Canaan took place. They trekked west to satisfy land hunger and the indomitable spirit of pioneering. Daniel Boone preceded the McDowells by fourteen years in his first visit of exploration to Kentucky.

This earlier colony of Transylvania was called Kentucky, which means meadow land from "Kentake" in the Iroquois language and was so named in the blessed year of our Declaration of Independence. Over half a century after the Revolutionary War, there were nearly a thousand veterans still living who in their adventurous spirit had immigrated to Kentucky. These early settlers, at a distance of nearly a thousand miles from the capitol in Richmond by way of the famous Wilderness Road, succeeded in having Kentucky separated from Virginia and admitted into the Union in 1792, nine years after the McDowell migration. This wilderness settled by intrepid spirits was really the "Dark and Bloody Ground." The depredations of the Indians made constant warfare. The highest type of courage was essential to the safety of these fearless people. It was the "Wild West" of that day. While it nestled against the Alleghanies on the east, its fathomless extension to the unknown west constituted that ever advancing and beckoning frontier which gave to America the opulence of the Golden West, and to history the most picturesque frontiersman the world has ever known.

Ephraim McDowell was born in Rockbridge County, Virginia, in 1771, on November 11. This was an armistice day against woman's thraldom from ovarian cysts. This child was to write a treaty—The Surgical Treaty of the Wilderness. This Virginian, born under the British flag, was

¹Presidential Address, presented before the Convocation of the American College of Surgeons, Chicago, October 13, 1933.

five years of age when the War of Independence started and thirteen years old when he was brought into that heroic land that he was to make sacred as the birthplace of a great contribution to humanity. He was not the seventh son but the sixth son of eleven brothers and sisters.

The founder of the little town of Danville was killed by the Indians, but it became the first capital of the state of Kentucky. Lord Dorchester, writing back to England a few years after the McDowells established their residence, said the town had a hundred and fifty inhabitants whereas its sister city, Lexington, had about six times that many. Perhaps this is the reason why the Transylvania Seminary was moved there from Danville to become the first university in the west and the second medical school in the United States. Thirty years afterward, with McDowell as one of its incorporators, Center College was established.

At the age of nineteen he went "to read medicine" under his preceptor, Dr. Alexander Humphreys of Staunton, who was a graduate of the University of Edinburgh, then the greatest of the European schools. The system of the preceptor is no more. Now the crowded curriculum and supposedly superior advantages of an exclusive intramural training has done away with that inspiring example. May we not be losing something in giving up the wise precepts, the sagacity of observation, the resourcefulness, the tact, and the gentle tenderness of those worthies?

Immediately after his tutelage with his preceptor, McDowell went to Edinburgh. He remained there during 1793-4 but did not take a degree. He was accompanied by Samuel Brown who became an accomplished physician, one of the first teachers in Transylvania University. Among his students was the brilliant Benjamin W. Dudley, who became the greatest lithotomist of his time. David Hosack, whose memory is commemorated by the Academy of Medicine in New York, was also a student-companion of McDowell. He was a friend of Alexander Hamilton and acted as one of his seconds in the famous duel with Aaron Burr. Although a student under the second Monroe in Edinburgh, it appears that of his extramural teachers of surgery, the brilliant and eloquent John Bell was the most inspiring. He was a great anatomist and wrote works on anatomy and surgery. John Bell was a stormy petrel and was not in sympathy with many of the rigid customs and nepotism of the University. He had his own dissecting room and museum in a building on Surgeons' Square. Worshiped by his students, he was in constant con-

trovery with his colleagues. Much of his work was done in collaboration with his distinguished younger brother, Sir Charles Bell, who was the first to discover the function of the anterior and posterior root of the spinal nerves and to distinguish them.

McDowell began his practice at Danville in 1795, and soon became the premier surgeon west of the Alleghanies. He performed all the operations then known to surgery from an amputation to a tracheotomy. He operated repeatedly for strangulated hernia and was a skilled lithotomist. There is evidence also to believe that McDowell resected the parotid gland, thus long antedating McClellan and other American surgeons.

Before the days of stagecoaches, he made many visits within a range of one hundred miles or more through the trails of the forest alive with hostile Indians, the timber wolf, and the howl of the panther. Some of these journeys required a week or more. While Andrew Jackson, in 1812, with his Tennessee riflemen vanquished Pakenham from behind the cotton bales at New Orleans, another future president of these United States, James K. Polk, a callow youth of nineteen, journeyed on horseback to Danville from his home in Columbia, Tennessee, which the poet, John Trotwood Moore, has denominated "the dimple of the universe." McDowell removed a stone from the bladder of the future eleventh president. He did altogether thirty-two lithotomies without a death. He abandoned the lateral operation with the gorget and did the central perineal lithotomy, as we do today, thus differing from the other famous lithotomists of the South—Dudley, Briggs, and Eve. Most of his operations were performed on Sunday because it was the most quiet and the day on which he had the most leisure.

Of the first ovariectomy, let the valiant surgeon give his own brief description in this extract under the heading,

THREE CASES OF EXTIRPATION OF DISEASED OVARIA

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 fibres of the above named muscle, extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribed to the resting of the tumor on the horn of the saddle during her 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 a dirty, gelatinous looking substance. After which we cut through the fallopian tube, and extracted the sack, which weighed seven pounds and one-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 dressings, 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.

During the exultant heroism of war, with flying flags and clarion's call, with flaming patriotism, one can understand the bravery of the soldier. But to essay the unknown without the urge of battle-call requires much more courage than to lead the valiant charge. As the result of this epoch-making event, now no hamlet is without an example of one who has received the benefit of a surgical procedure within the confines of the abdominal cavity. The confidence with which this and many other abdominal operations are performed today is vastly different to this unknown and untried experiment. There was no anaesthesia, no precedence, no hospital, no trained assistants: the doubt of the patient's recovery, all made it a marvelous undertaking.

The lethal tendencies of ovarian tumors had been only too well realized. Their fatal result in a few years was inevitable. Many, many women were tapped for mere temporary amelioration of their unrelievable burden. It had to be repeated again and again. One case reported by Penrose had 299appings, which removed a total of 9,867 pounds.

The anatomy and pathology of these growths were understood; many autopsies had been performed; and while this had been within the conception of man it was believed to be incompatible with life. In McDowell's brain there was the dormant thought that had been given by his inspirational teacher, John Bell, who had by careful postmortem examination shown the physical feasibility; but it was like the gunpowder, it required the spark. McDowell was the lightning-forged spark.

Was this man heaven-endowed? We acclaim him a bold, intrepid genius who had all the preparation and the grim courage to put to the test the possibility of what he dreamed.

A hundred years before, William Hunter, the anatomist and obstetrician, taught that excision can hardly be attempted. John Hunter, the surgeon and man of vision, said, in 1785, "I cannot

see any reason why, when the disease can be ascertained in an early stage, we should not make an opening into the abdomen and extract the cyst itself" and "Why should not a woman suffer spaying without danger as well as animals do?"

It was estimated by Peaslee that in the thirty years prior to his analysis of all ovariectomies in 1870, that thirty thousand years had been added to the lives of those women who had undergone the operation, to say nothing of the thousand years of untold agony that they would have collectively endured.

Koerberle of Strasbourg who invented the piano wire ligature under metal skewers in the extra-peritoneal treatment of the pedicle of a fibroid tumor, said of ovariectomy: "It was an operation without a parallel, and an operation that was fraught with happiness. . . . It was one of the most convincing titles to glory of our surgical epoch."

The fact that McDowell lived in the wilderness and has been referred to as a backwoods surgeon, perhaps was a blessing. It gave him those indomitable characteristics of courage which strife with the Indian tribes begot in those tense times. Quick decision and instant action were imperative. He was unriveted from the domination of universities, from the mandate of seniors, from the precedence of colleagues. He was an independent spirit. It is not an accident that this greatest of surgical dramas was enacted in the pure natural surroundings of God's frontier. Witness the greatest medical evolution of our own age which has transpired in a small town of the great upper middle west.

What better training could McDowell have had than a European background projected into the valorous life of those burgeoning times. The fact that he was a Surgeon of the Wilderness gave him the courage to carry out the operation. The absence of sepsis was due to the cleanly condition of the open country and the absence of large numbers of suppurating wounds menacing all new made wounds. We find the exact setting, a man who believed in himself and who had vision, a woman brave enough to follow her necessitous intuition. The open-mindedness of McDowell and the heroism of Jane Todd Crawford were the needed twain. But for them the operation of ovariectomy might have been postponed a half hundred years. It is recounted by her grandson that during the terrible ordeal she repeated the Psalms, and we can well imagine that it was the beloved Psalm of David, "Yea, though I walk through the valley of the shadow of death, . . ."

The great granddaughter of the woman whose bravery made the feat possible said that Jane Todd Crawford and Mary Todd Lincoln, the wife of President Lincoln, were both descended from two brothers Todd who settled in Pennsylvania. She lived to be seventy-eight years of age, having survived the operation more than thirty-two years.

McDowell has been criticized for not reporting his work earlier. He waited seven years. Meanwhile he performed two other ovariectomies. He sent his report to Dr. Phillip Syng Physick, the leading surgeon of Philadelphia, who was called the Father of American Surgery. He had been an assistant to John Hunter. All his life he retained his queue. He was engaged in all the arduous duties of teaching medicine, was introspective, and really a sick man. He did not publish his own work and did not give much consideration to McDowell's report. Dr. James McDowell, his nephew, then finally presented it to the editor of the *Eclectic Repertory and Analytical Review*. It saw the light of published day from the consideration of Doctor James, the editor, who was professor of midwifery in the University of Pennsylvania. Both Physick and James had left Edinburgh just a year before McDowell matriculated.

A duplicate copy of his report he forwarded to his old master, John Bell, who on account of his health was in the south of France. He died in Rome without hearing of the momentous exploit of his blessed disciple. It fell into the hands of Mr. Lizars who was looking after the work of his absent chief. There it reposed for another seven years, until Mr. Lizars had essayed the operation himself. He reported his work in a beautiful monograph and published in connection therewith the three cases of McDowell in the *Edinburgh Medical Journal* for October, 1824. Mr. Lizars had performed three operations, one patient recovered, one died, and in another the operation was for the mistaken diagnosis of phantom tumor. McDowell's three successful cases were thus brought sharply to the attention of the large part of the English profession.

McDowell was most scathingly and sarcastically criticized. The *Medico-Chirurgical Review* of January, 1825, said editorially: "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."

Like many prophets, he was doubted, especially in his own country. His critics were at times libelous. The criticism was so extreme that he indited a card to "The Physicians and Surgeons

of the West, and particularly to the Medical Faculty and Class at Lexington" and stoutly defended his operation which had been challenged.

He said, "Although the termination of this case was most flattering, yet I was more ready to attribute it to accident than to any skill or judgment of my own, but it emboldened me to undertake similar cases, and not until I had operated three times, all of which were successful, did I publish anything on the subject." When, however, the accuracy and truth of the accomplishment had been made known the London editor 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 ovaria. . . . There were circumstances in the narrative of the first three cases that raised misgivings in our minds, for which uncharitableness we ask pardon of God and of Doctor McDowell of Danville."

McDowell made a second report in September, 1819, in the form of a letter to Doctor James, the editor of the *Eclectic Repertory*, entitled "Observations on Diseased Ovaria." He reported also two additional operations. One in April of 1817 in which the cord, which he had firmly tied around the ligament attached to the uterus before cutting away the tumor, slipped off owing to the "shortness and sponginess of the part" and a profuse discharge of blood occurred. He religatured the pedicle but without satisfactory results. He then armed a needle with a strong ligature and passed it around the ligament and secured it in its place by several sutures firmly tied, with a recovery. The tumor weighed five pounds. Thus a new, and now old, method in transfixation of abdominal pedicles was first employed.

In 1822 he rode from the blue-grass region of Kentucky to its replica in the blue-grass bowl of the middle basin of Tennessee. He went to operate upon Mrs. Overton for an ovarian tumor. She was a very corpulent woman, the wife of General Thomas Overton, friend and neighbor of General Andrew Jackson and his comrade in arms in the Creek War.

During the ovariectomy upon Mrs. Overton, her neighbor, General Jackson, is said to have held her hand and otherwise supported her fortitude. McDowell visited General Jackson at the Hermitage, fourteen miles from Nashville, and at his request operated upon a negro slave, removing a very large tumor from his neck.

Upon the presentation of the check which General Overton gave him at the little bank on the public square, the cashier presented him with

a sum far in excess of his fee. McDowell thinking there was some error, sent a horseman to the vicinity of the Hermitage. He came back with the message that there was no mistake and General Overton only regretted that he did not have more to pay for the great service which had been rendered his wife. This generous measure of appreciation is only occasionally encountered in Nashville today. Gross said this was the largest fee ever paid in this country for a surgical operation, and under all the circumstances comparable to the fee of one thousand guineas paid by the Indian merchant to Sir Astley Cooper.

Mrs. Overton, who was operated on at the age of fifty-five years, lived to be seventy-seven and her tomb is now at the site of the great DuPont Powder Plant, which was erected during the World War.

McDowell performed ovariectomy thirteen times with eight recoveries, four deaths, and one case was uncompleted.

And what of the personality of this great-hearted man?

He was adjudged handsome with lustrous black eyes. He was nearly six feet tall, rather florid, somewhat inclined to corpulency. He could upon occasions play his violin. While our profession are often unable to cultivate the Muses, I remember hearing von Mikulicz and Maurice Richardson play a Beethoven sonata, in the home of W. J. Mayo, himself a great lover of music. A temperate man, he occasionally indulged in a sup of cherry bounce—a celestial cordial. In literature he preferred his fellow-countrymen—Scott and Burns. He was the fastest foot racer in the University and the Edinburgh paper said, "He has a superb physique, lithe, and of almost Herculean strength." He was one of the kindest-hearted and most amiable men, overflowing with cheerfulness and good humor. He married the daughter of Kentucky's first and greatest Governor—Isaac Shelby.

He died in 1830 and in the fifty-ninth year of his age. The records are not at all satisfactory but it seems he had a severe, acute, painful abdomen with nausea, vomiting, and fever that was fatal within two weeks. As a result of his own labors it has been vouchsafed to surgeons to combat acute catastrophes of the abdomen from which he died.

In 1823 the University of Maryland had conferred upon him the honorary degree of Doctor of Medicine.

In 1879 the Kentucky State Medical Society erected a monument of enduring granite to his memory and a notable oration was delivered by the Nestor of American Surgery—Samuel D. Gross. In presenting a memento to Doctor Gross on that occasion, Cowling said, "When history shall recall his deeds and dwell upon his memory, it will relate how, when he was fifty years at rest, the greatest of living surgeons in America came upon a pilgrimage of a thousand miles to deliver a noble oration." As the most intimate memento, the door-knocker of McDowell's house was chosen. The presenter said, "It will tell of many summonses upon mercy's mission which did not sound in vain. Ofttimes has it roused to action one whose deeds have filled the world with fame."

One of his biographers, Schachner, to whom I am indebted for many facts, said, "Ovariectomy placed in the diadem of the art and science of surgery its most brilliant gem and in the æon of time becomes the indirect emancipator of countless millions of human beings from protracted suffering and premature death."

May we say with Gross of this immortal soul who has done for surgery what civilization has done for the wilderness, "All honor to the man who had the courage and skill to do that which no man had ever dared do before."

The unexampled achievement of the Surgeon of the Wilderness, Ephraim McDowell, "like the widening waves of the inviolate sea, shall reach the uttermost shores of time."