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A BRIEF REVIEW OF THE GROWTH OF McDOWELL'S OPERATION DONE AT DANVILLE, KENTUCKY, IN 1809; ITS PRESENT STATUS.

Delivered Wednesday, April 29, 1885.

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OF PITTSBURG.

IN the bleak cold of a December day, in 1809, a woman riding on horseback, arrived in Danville, Kentucky. She had taken farewell, perhaps forever, of relatives and friends, and had just completed a journey of sixty miles that she might be near a surgeon, who had promised to open her abdomen, and attempt to remove the large ovarian cyst it contained. She was to be the subject of an experiment—an experiment at the hands of a surgeon living on the borders of civilization—an experiment which would involve her life, and to which she must submit without the blessing of chloroform or ether. This woman possessed of marvellous courage, was Mrs. Crawford, McDowell's first patient in ovariotomy, and the first patient upon whom the operation was ever deliberately undertaken. She recovered and lived to the advanced age of seventy-nine years, a period of thirty years beyond the operation.

The conditions surrounding, and forming part of this operation, are worthy of more than a passing notice. At the present time, they are declared by the ablest operators to be of more than accidental importance.

In the light of all recent advances concerning the environs of an ovariotomy patient, I ask you to listen thoughtfully, and inquire of yourselves: Have modern operators had better environment than McDowell? Is their quarantine better than his was? Whether accident, or necessity, or the simplicity of border life, provided these conditions so favorable to recovery, your orator will not inquire, but hopes to show that McDowell did operate under conditions as favorable as does Dr. Keith or Mr. Lawson Tait.

1st. The patient was refused operation in her own home.

2d. She was operated upon in Dr. McDowell's own house.

3d. History mentions but one assistant present at the operation.

4th. The patient had never been tapped.

5th. We may safely infer that the room in which the operation was performed, contained, at this early date in Kentucky, no superabundance of furniture or upholstery.

6th. That the room was ventilated by an open fireplace is more than probable.

7th. The atmosphere was that of a healthy border town.

8th. No sponges were introduced into the abdomen.

9th. He ligated the pedicle and dropped it in.

This operation will stand the criticism of the most exacting specialist of the year 1885, save in two particulars: viz., the ligature was not carbolized or scalded, the ends of it were left hanging out of the lower angle of the wound, and merely turning the woman on her side to permit all fluids to escape from the cavity of the abdomen was scarcely enough in that direction.

The incision was made to the left of the rectus muscle, but in his next case McDowell made it in the linea alba, between the umbilicus and pubis.

Pause a moment! Think; at the end of almost three-quarters of a century, the operation stands almost where McDowell left it, with one solitary exception, viz., the ends of the ligature surrounding the pedicle are cut short.

Restless human nature, not satisfied, sought other means of treating the pedicle, a review of which is fraught with good instruction. For eleven years the operation remained in the hands of McDowell, and he adhered to ligation of the pedicle, leaving the ends of his ligature hanging out at the lower angle of the wound. In 1820, Chrysmar, of Würtemburg, tied the pedicle in two portions, leaving the ends of the ligature hanging out at the lower angle of the wound. In 1821, Nathan Smith, of New England, tied the pedicle with "strips cut from a kid glove;" he cut the ligature off close to the knots, and dropped the pedicle into the abdominal cavity.

Neither Chrysmar nor Nathan Smith knew anything of McDowell's operations. Were the teachings of Hunter and John Bell working upon other minds, as well as upon the mind of Dr. McDowell? The last named sent to Mr. John Bell, of Edinburgh, an account of his cases. Mr. Bell being then in Italy, his colleague, Mr. Lizars, received the report. It is probable that this record was received in 1818. For six years Mr. Lizars kept it to himself. He attempted ovariotomy four times, and succeeded in one case, the patient surviving the operation seventy days. In one case he opened the abdomen by an incision reaching almost from the ensiform to the pubis, and thrust his hand into an empty belly. He requested every one of his students to put his hand into the abdomen, and finally exclaimed, referring to an army officer present, "Where is the military gentleman?" and had him make the same manual exploration. Mr. Lizars then closed the wound, *and it healed by first intention.*

Owing to the fact that Mr. Lizars's results were bad, twenty years elapsed before ovariotomy was again attempted in Scotland. In 1845, Dr. Handyside performed it. Another halt of seventeen years occurred, bringing us up to 1862, at which date but one success had been attained in Scotland. In that year Dr. Thomas Keith did his first operation.

Let us now cease the pursuit of Dr. McDowell's operation, as it was reported to Mr. John Bell, which report the latter did not live to see.

Up to the year 1843, I find the records of only eighteen completed ovariotomies in America. In this year, Dr. Alexander Dunlap, of Springfield, Ohio, and Dr. John L. Atlee, of Lancaster, Pa., did their first cases, the latter removing both ovaries. Eleven years later (1855), Dr. Kimball, of Lowell, began operating. These three are now the only living pioneers of the army. May they live long to enjoy the distinction!

The operations in the United States were already numerous, and the stability of the operation secured. This was before Sir Spencer Wells did his first ovariotomy.

It is estimated by Peaslee that up to the last quarter of 1863, over three hundred ovariotomies had been done in this country. At this date, Dr. Keith was only beginning in Scotland; the operation was performed for the first time in Russia, and was only a year old in Italy. Twelve years after the death of Dr. McDowell, in 1842, Dr. Charles Clay of Birmingham, England, did the first operation in that country; prior to this time, Jeaffreson, Walne, King, and West had each removed, by abdominal section, parovarian cysts. In 1851, Baker Brown began operating in St. Mary's Hospital, London; his results were not good, and the intense opposition of his colleagues drove him from the hospital; he then founded "The London Surgical Home," where his results compared favorably with those of any other surgeon of his time. *It was mainly due to his action that the practice of performing ovariotomies in large hospitals, where isolation is impossible, ceased.*

From Baker Brown, Nélaton learned the operation by personal observation, and returning to France, related, in a public lecture, how he had seen Brown do five cases, three of them in a single day; and thus through the influence of Brown on Nélaton, the opposition to ovariotomy in France was largely diminished. In 1854, Baker Brown taught Sir Spencer Wells the operation, and in 1857, Sir Spencer did his first operation. In 1864, according to Sir Spencer Wells, the operation was completely established in London, and, we may add with pride, in every country in the civilized world.

But while the surgical world recognized the operation, there was a diversity of opinion with regard to the treatment of the pedicle. From the date of Dr. McDowell's first operation up to 1821, when Dr. Nathan Smith operated, the ends of the ligature were brought out at the lower angle of the wound; Dr. Smith was the first to cut the ends off. For sixteen years afterwards no other method was offered. In 1837, Stilling, of Cassel, in the province of Hesse-Nassau, Germany, used the cautery, and suggested stitching the pedicle to the wound.

Nine years barren of new suggestions again elapsed, when, in 1846, Dr. Handyside, of Edinburgh, Scotland, carried the ligatures through the cul-de-sac of Douglas into the vagina. In 1848, Stilling treated the pedicle outside of the peritoneal cavity. Two years later, in 1850, this method was inaugurated in London by Mr. E. W. Duffin. The introduction of the extraperitoneal method of treating the pedicle by Stilling, in 1848, began a long and serious conflict which has happily died out with the method. Maisonneuve, of Paris, in 1849, had twisted the entire pedicle in one case, and Martin, of Jena, had stitched the pedicle to the wound. About this time Langenbeck stitched the pedicle to the wound, and covered it with skin from the margin of the incision.

Eight years later, in 1850, Dr. John L. Atlee, of Lancaster, Pa., introduced the écraseur to divide the pedicle. He was imitated by a number of prominent operators, notably by his brother, the late Washington L. Atlee. Sir Spencer Wells, Dr. Keith, Professor Pope, of St. Louis, U. S., and Professor Billroth, of Vienna. This year proved unfortunate for the operation, for during it Mr. Johnathan Hutchinson invented the clamp which perpetuated the extraperitoneal mode of treating the pedicle. In 1860, Sir James Y. Simpson secured the pedicle within the cavity of the abdomen by acupressure needles passed through the abdominal wall. About 1865, Koeberle, of Strasburg, invented his serre-nœud, or wire constrictor, with which he grooved the pedicle prior to applying the ligature.

In 1864, Mr. I. Baker Brown, of London, reverting to Stilling, of Cassel, established the use of the cautery, *a method rejected in London, taken up by Dr. Keith, and now credited through him with the best statistics yet attained by any operator.* In 1868, Masslovsky, a Russian, amputated the pedicle by double flaps, one on each side, and stitched the flaps together. In 1869, Dr. McLeod, of Glasgow, Scotland, by means of two pairs of strong forceps, twisted the pedicle entirely off. During this year, Dr. Peaslee invented a scabbard and knife by means of which the pedicle was secured, the ligature traversing the scabbard. After forty-eight hours the ligature was cut by introducing the knife into the scabbard, when both ligature and scabbard were withdrawn. In 1870, Dr. Thomas Addis Emmett reported eighteen cases in which he had secured the pedicle by means of silver wire.

Up to the present year (1885), every conceivable thing has been done with the pedicle. It has been tied entire; tied in sections; been twisted off; burnt off; crushed off; cut square off; cut off in flaps; left inside; left outside, and been made to slough off. The extraperitoneal method of treating the pedicle is gone. The question is now resolved into the merits af the ligature cut short, the Dr. Nathan Smith method, or the clamp cautery, as introduced by Mr. I. Baker Brown, of London, in 1864. If the clamp as devised by Mr. Jonathan Hutchinson was a bad instrument, and according to Mr. Tait, reduced the statistics that Sir Spencer Wells should have attained, it must have similarly affected the results of those who have employed it in the United States. Recently ligation and the cautery have given almost equal results.

The operation of Dr. McDowell in so far as it relates to the treatment of the pedicle, is, therefore, triumphantly where he placed it, despite the ingenuity of the surgical world, having undergone but a single alteration, namely, Dr. Nathan Smith's improvement of cutting the ligature short I have not been able to learn anything as to the extent sponges were used by the pioneer operators. When Dr. Keith was about to do his first operation, he had the water to be used boiled the night before, and he made everything scrupulously clean; during the operation he was surrounded by old practitioners.

After removal of the cyst, he thrust a big sponge into the abdomen, and brought it out full of fluid. As he was about to repeat this, one of the doctors seized his

arm, and exclaimed, "For God's sake don't do that again." While he hesitated, the others argued that any fluid left in the body would be a nice protection to the intestines. He closed the wound. Subsequently the patient did badly. He at once opened the wound and let out a pint of dirty fluid, and the patient recovered. From that time he advocated careful sponging after the operation, *and he was the first to insert a flat sponge under the wound while the stitches were being placed.* Koeberle, who also began to operate in 1862, *introduced the compression forceps and drainage, first by short and later by long glass tubes.*

I here show you the Baker Brown cautery clamp, used by Dr. Keith, the compression forceps of Koeberle, *also the modification by Sir Spencer Wells*, and the drainage-tubes so much in use by operators in Great Britain.

The technique of McDowell's operation is, probably, complete, *and its future will depend on the subject, the place of application, and the care taken to protect the patient from extraneous sources of danger.* It may be compared to a mighty oak, each decade of years having added to its greatness until its far-reaching branches furnish shelter for the thousands of men and women who require abdominal section. Its ramifications are hysterectomy for fibroids, hepatotomy, cholecystotomy, normal ovariotomy, the Hegar-Tait operation for the removal of both ovaries and tubes, nephrectomy, exploratory incisions, gastrotomy, and enterotomy. It still continues to grow, and the task of pointing out the leaves that have been added to its foliage during the last year requires our efforts ere they fall about the roots and contribute themselves to the growth of the parent tree.

Valuable lectures and papers have been given by Dr. Keith, Mr. Lawson Tait, Mr. Savage, Sir Spencer Wells and Mr. Bryant, all in the *British Medical Journal.*

The results of valuable experiments on lower animals have been published by Prof. C. T. Parkes, of Chicago. Many successful cases of the Hegar-Tait operation done by our countrymen, and the surgeons of Great Britain, have been published in various journals.

Mr. Thornton has been successful in gastrotomy for the removal of a large foreign body, and has had seventeen successful cases of nephritic surgery, ten of these being nephrectomy by abdominal section. Drs. Keith and Bantock continue to do supravaginal hysterectomy with unparalleled success, and it is premised that, if their success continues, it will elevate their method of operating beyond the reach of controversy. They both adhere to the extraperitoneal treatment of the stump, while the continentals practise the intraperitoneal method.

The recent visit of Mr. Lawson Tait to the United States, has given a great impetus to the Hegar-Tait operation for the removal of diseased tubes, and for the removal of ovaries and tubes for the cure of fibroids of the uterus.

For the purpose of encouraging the conservative abdominal surgeons, *those who look carefully to the environment of their patients*, I point with great pleasure to the fine statistics of Dr. John Homans, of Boston, and of Dr. Robert Battey, of Georgia, whose early initiation of normal ovariotomy was suggestive eventually of the Hegar-Tait operation which included the tubes.

Ovariotomy and its offshoots comprise almost, if not the entire field of abdominal surgery. The establishment of the parent operation brought out the others, if not for the first time, it revived and established them after they had been practically abandoned. "The seed was sown by Bell and Hunter, carried by McDowell, and planted in Kentucky;" its first growth was slow, but gathering strength from the passing years, its top has risen high, and its great branches cover a wide space, where unfortunate men and women of every land and clime gather to find relief from suffering and to acquire new leases of life.

The carbolic spray is still a matter of dispute. In Great Britain, Mr. Thornton adheres to it as of old, Drs. Keith and Bantock, and Mr. Tait will have none of it. The latter said to me, "I sold out all my right, title, and interest in Listerism, with my tea-kettle to Battey."

So far as I know, the best statistics yet obtained in ovariotomy in the United States belong to Dr. Battey, of Georgia, and Dr. John Homans, of Boston, Mass., both of whom operate under the carbolic spray, and in apartments kept especially for abdominal operations. I make special mention of the fact that these gentlemen use the carbolic spray, for the reason that Dr. Emmet says in his last edition, p. 715, "I do not know of any prominent operator in this country who now uses the spray," evidently an oversight.

I do not use the spray myself, but look upon the entire Lister system, less the spray, as firmly grounded in the surgical mind. Cleanliness and Listerism can never be separated, for "Listerism is the gospel of cleanliness;" without the latter you cannot have the former.

The year has wrapped up in its eternal folds one whose name is synonymous with the surgery of women; one whose reputation is immortal, who in America at least, stood next to McDowell; beloved by his own countrymen honored by the entire surgical world. No eulogy of mine can increase his fame. I speak of *the great, the good, the pure, the noble, the generous* Marion-Sims. Like McDowell, he possessed a genius for origination, and will share with him the admiration and plaudits of future generations.