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ABDOMINAL SURGERY.

BY

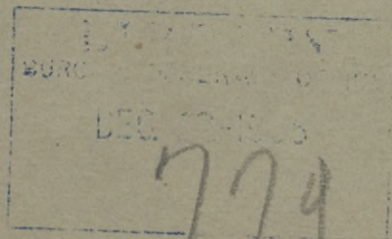
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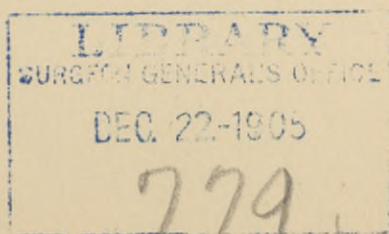
AN HISTORICAL SKETCH OF ABDOMINAL
SURGERY.

BY JAMES R. CHADWICK, M.D.,
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Two events have occurred during the past year of vital significance in the development of abdominal surgery: The death, on January 31, 1897, of the most active promoter of this branch of surgery—I allude, of course, to Sir Spencer Wells—and the semi-centennial celebration of the discovery of surgical anæsthesia, on October 26, 1896, without which discovery abdominal surgery could never have been extensively practised.

I propose to sketch briefly the steps by which abdominal surgery has been so marvellously extended during the lifetime of one man, laying special stress upon what might otherwise be inadequately remembered, his influence upon the progress of this branch of surgery. Abdominal surgery in general is all the outcome of ovariectomy, so that in its early days the history of the former is included in the history of the latter. For this reason we Americans have an additional incentive in reiterating the indisputable fact that the first operation was done on our soil by one of our own countrymen.

On the 13th day of December, 1809, in a frontier town of Kentucky, Dr. Ephraim McDowell successfully removed from Mrs. Crawford an ovarian tumor weighing twenty-two



pounds. This was not a haphazard operation undertaken by a rash or ignorant surgeon. Dr. McDowell was a man of great natural intelligence, of dogged determination, of striking conscientiousness, of unflinching piety, whose early professional education in Virginia had been supplemented by two years' (1793 and 1794) study in Edinburgh under some of the most famous surgical teachers of his time. He had undoubtedly been inspired by the enthusiastic prediction of one of his preceptors, Mr. John Bell, that ovarian tumors might some day be successfully removed, so that, fourteen years later, when Mrs. Crawford, whose malady was hastening rapidly to a fatal termination, consulted him, he dared to advise the removal of the tumor, and to do it, in spite of the howling mob before his house, threatening his death in case of failure. Before operating he wrote out and put in his pocket a prayer: "Direct me, O God! in performing this operation, for I am but an instrument in Thy hands, and am but Thy servant; and, if it is Thy will, oh, spare this poor, afflicted woman," etc.

Dr. McDowell first published this case, seven years later, with two others, in the *Eclectic Repertory and Analytical Review* for October, 1816. A copy of this paper, sent by him to Mr. John Bell, fell into the hands of Mr. Lizars, who appended it to his report of a case of attempted ovariectomy published in the October number of the *Edinburgh Medical and Surgical Journal*, 1824. In 1825 Mr. Lizars further attempted ovariectomy three times, with so unsatisfactory results that the operation was discountenanced in Scotland, and was not repeated for twenty years. He was, however, first to do the operation in Great Britain. Meanwhile Dr. A. G. Smith, of Danville, Ky., did the operation unsuccessfully in 1818 and successfully in 1823; Dr. Nathan Smith, of Yale College, successfully in 1820, at Norwich, Vt.; Dr. J. A. Gallup unsuccessfully in 1824, at Woodstock, Vt.; Dr. D. L. Rogers, of New York, successfully in 1829; Dr. J. C. Warren, of Boston, unsuccessfully in 1830.

Meanwhile, before his death on June 20, 1830, McDowell had operated thirteen times, with at least eight recoveries.

On the continent of Europe the operation had found but little favor. In Germany the first operation was performed by Chrystmar, of Isny, Württemberg, in May, 1819; but from that year till 1850 but 23 operations were done, with only seven recoveries. In France there was no operation until that by Dr. Woyerkowsky in 1844, and but three (with two successes) up to 1850. From the *Table of Ovarioto-mies*, published by Dr. W. L. Atlee in 1851, I obtain the fact that up to January 1, 1847, not more than 150 operations had been performed in all countries.

Just before this date the world had been electrified by the announcement of a discovery of more transcendent importance for the welfare of humanity than any that had preceded it. On October 26, 1846, Dr. W. T. G. Morton demonstrated the fact that the fumes of sulphuric ether would render a human being insensible to pain by administering it to a patient at the Massachusetts General Hospital, in Boston, U. S. A., while Dr. John C. Warren excised a tumor from his neck without his experiencing the slightest sensation. Luckily for the rapid dissemination of this announcement and its prompt adoption throughout Christendom, it came vouched for by surgeons of eminent standing and unquestioned integrity.

This event gave an immense impulse to surgery in general, not only for the reason that patients would submit willingly to the knife from the knowledge that the procedure, which promised a chance of life or escape from protracted suffering, was absolutely free from the intense anguish which had previously attended all operations, but also for the reason that the time consumed in the operation had ceased to be an important matter, so that surgeons could dissect leisurely and carefully, where they had formerly had to hurry through their task for fear that the patient would die of shock upon the table. If this was true of surgery in general, how much

more must it have influenced the performance of ovariectomy, where the thought that their vitals were to be invaded by the knife of the surgeon must have appeared more terrible to the suffering women than the slow death to which they knew themselves to be doomed by the progress of the disease. While there may have been other women whose fortitude was as great as that of Mrs. Crawford, who, with a full understanding of the nature and hazard of the operation and of its never having been performed before, accepted the risk and endured the torture, yet the majority must have shrunk from the ordeal. The operator, too, must have needed all his nerve and skill to conduct an operation to a successful issue, with the patient shrieking and writhing in agony. While I have been unable to discover that the ovariectomists of the day, in their reports, laid any stress on this new procedure as an important factor in facilitating their work, a notable spread of the operation is apparent in the ten years following this discovery.

Between 1847 and 1857 the number of operations increased rapidly, but still in the hands of comparatively few operators. These were still chiefly in America and England. In the former the most determined operators were Drs. John L. and Washington L. Atlee, Peaslee, Burnham, Kimball, and Dunlap; in England, Drs. Clay, Bird, and Baker-Brown. Up to the end of 1856 there had been only 97 operations in America, with 54 successes; in England 123 operations, with 76 successes; in Germany 47 operations, with only 13 successes. In 1850 there was a discussion of ovariectomy at a meeting of the Royal Medical and Chirurgical Society, on November 12th, in which there was general complaint that the incomplete and unsuccessful cases had not been reported. The consensus of opinion was strongly condemnatory of the operation. The years 1856 and 1857 were made famous in the annals of ovariectomy by the renowned discussion in the Academy of Medicine of Paris. Up to that time ovariectomy had been completed but four times in France, twice success-

fully. All the disputants but one—Cazeau—condemned ovariectomy as a rash, unjustifiable procedure.

We now come to the "Revival of Ovariectomy," as it was called by Spencer Wells in the title of one of his retrospective papers, his participation in which earned for him the name of the "Greatest of Ovariectomists." Before setting forth his share in this movement I should feel called upon to dilate upon his early training were these data not to be set forth more fully elsewhere in this volume. Suffice it to say that when he settled in London, in 1853, he had never seen a case of ovarian disease. His first incomplete attempt to remove an ovarian tumor was in December, 1857; his first complete operation in February, 1858; before the year closed he had done two more operations, both successfully; in 1859, 11 cases; in 1860, 6 cases; in 1861, 11 cases; after which the number increased at a rapid rate. The secret of his success did not consist in any special procedure, but by attention to a multiplicity of details which, in the aggregate, did a great deal to insure recovery. Simple bandages for keeping the patient quiet supplied the place of an objectionable crowd of assistants. Every spectator had to declare that he had not made a post-mortem examination or been in a dissecting-room or attended any case of infectious disease within a week. The room, bedding, clothing, sponges, and instruments received the utmost attainable purification. The incision in the abdominal wound was shortened; the cyst was emptied before it was drawn out; extreme care was taken to prevent the entrance of ovarian fluid into the peritoneal cavity; and likewise to cleanse the cavity of all blood or fluid which had entered it.

The favorable results which he achieved by these details had far less effect in reversing the verdict of the profession than the absolute openness with which he operated in the presence of authorities and the perfect honesty with which he published every case, successful or otherwise, doing his full duty by stating "operated in the presence of A., B., and

C.," and the exact time and the conditions under which every fatal case terminated. Every result could be corroborated by unimpeachable witnesses and records. By this means he silenced the criticisms passed upon previous operators, with more or less justice, of concealing their unfavorable results. Under these conditions public opinion rapidly changed in England. In February, 1859, he reported his first five operations to the Royal Medical and Chirurgical Society, and by 1860 the verdict of the profession was reversed. In 1862 he reported to the same society his first fifty cases of ovariectomy. From this date his publications were numerous. In 1865 he published his first book, *Diseases of the Ovaries: their Diagnosis and Treatment*, being a full clinical report of his first 114 ovariectomies. In 1872 he published a new book under the same title, being a full summary of the subject, with tables of 500 cases; in 1882 another, entitled *Ovarian and Uterine Tumors: their Diagnosis and Treatment*; and lastly, in 1885, another, entitled *The Diagnosis and Surgical Treatment of Abdominal Tumors*.

Of course, during the early years of this period other operators did not fail to follow his lead, notably Thomas Keith, of Edinburgh, who vied with his acknowledged master in painstaking attention to the details of the operation and absolute honesty. The relations of these two great men were admirable in their appreciation of each other. Writing, in 1863, Keith says: "No one has done more than Mr. Wells to improve the operation and simplify its after-treatment; and it gives me pleasure to acknowledge that when I commenced these operations I took him for my guide." In 1884 Wells says: "Keith was one of the first to follow me, and did more than anyone else at that time to assist in the revival of ovariectomy. I had done eight cases when he began, and ever since we have gone on, side by side, very friendly rivals, assisting each other, comparing notes, not always running on the same track, but always equally anxious to perfect the operation. You all know how won-

derful his success has been. Some of his later cases of the removal of uterine tumors are unsurpassed as surgical achievements.'"

It was my fortune to witness many of Mr. Wells' operations in the spring of 1873, and in some instances to assist him. I shall never forget the impression his strong personality made upon me and the admiration his honesty and skill inspired. As an instance I especially recall being his sole assistant in an operation in Birmingham, when, the moment his first incision laid bare the surface of the tumor, he stopped and said in a low tone, through lips which never seemed to move, hardly to open, "Hullo! what's that?" With two fingers he explored the tumor and the abdominal cavity; then, turning to the patient's physician, who had maintained from the outset, contrary to Mr. Wells's opinion, that the tumor was an enlarged spleen: "Doctor, you were right; it's the spleen." After a moment's consideration, he said: "I think I'll take it out," enlarged the incision and took it out. Unfortunately, the woman died on the fourth day. Two weeks later, when I presented a letter of introduction from Wells to Keith in Edinburgh, the latter had hardly glanced at my card when he said, "I have been waiting to see you; now sit right down and tell me all about the removal of that spleen." I make no apology for introducing this personal episode, because it illustrates better than words the character of these two great ovariologists and discloses the secret of their successes and of the confidence which they inspired.

The influence of Spencer Wells' work and publications was not long in being felt on the continent of Europe. In France only three operations, all fatal, were performed between 1857 and 1862. In the autumn of 1861 Nélaton visited London purposely to witness the operation of Wells and Baker-Brown; returning, full of enthusiasm, he lectured at the Hôpital des Cliniques, on October 25th, upon the five operations that he had seen, and appealed energetically to

the surgeons present to lay aside their exaggerated fear of this operation. His influence, together with the appearance of several publications, led to the performance of 14 operations in 1862. Koeberlé, of Strasburg, did his first operation on June 2, 1862. Péan did his first in November, 1864. Up to April 1, 1867, there had been 116 reported cases, with only 47 recoveries. In Germany there had been only 55 operations, with 40 fatal results, up to 1863. From 1864 to 1867 there were 125 operations, with 65 deaths. In Austria the first operation was done in 1866, and there were only 12 operations with 11 deaths up to 1871.

Meanwhile, in America the operators were as active as in Europe; but their work had not the influence upon the rest of the world as was its due, probably for the reason that the operators were to a great extent country surgeons who were not as ready with the pen as with the scalpel, so that the work of each was but little known beyond his immediate field of practice. A notable exception was Dr. Washington L. Atlee, of Philadelphia, who bore the brunt of the contest to overcome the prejudices against the operation. He displayed precisely the same honesty and completeness in his reports as did Wells, subsequently. Up to 1855 Dr. Atlee had done 31, and before his death, in 1878, 387 ovariectomies. He was ably seconded by Dr. E. R. Peaslee, of New York, who did his first operation in 1850.

Spencer Wells performed ovariectomy over 1200 times, reducing his mortality with every successive hundred cases. He lived to see the old dread of opening the peritoneal cavity banished from surgery—to see the operation of ovariectomy accepted all over the world; and he must have taken intense delight and pride in the thought that to his labors, more than to those of any other man, was this revolution attributable. He died of apoplexy, in France, on January 31, 1897, three days before his seventy-ninth birthday. With characteristic independence, his body was, by his request, cremated at Woking, England.

Before alluding to the final great innovation that has stimulated the practice of all surgery, but more especially that of abdominal surgery, I must ask you to glance with me for a moment at the studies which led to this great step. Louis Pasteur, born on December 27, 1822, was in 1854 nominated to be Dean of the *Faculté des Sciences* at Lille, France, and desiring to be of use to one of the principal industries of that Department, which was the fabrication of alcohol from beet root and from corn, resolved to devote a part of his time to the study of *fermentation*. To make clear the profound significance of this word I venture to transcribe a paragraph from the life of Pasteur by his son-in-law:

“All that has lived must die, and all that is dead must be disintegrated, dissolved, or gasified; the elements which are the substratum of life must enter into new cycles of life. If things were otherwise, the matter of organized beings would encumber the surface of the earth, and the law of perpetuity of life would be compromised by the gradual exhaustion of its materials. One grand phenomenon presides over this vast work, the phenomenon of fermentation. But this is only a word, and it suggests to the mind simply the internal movements which all organized matter manifests spontaneously after death, without the intervention of the hand of man. What is, then, the cause of the processes of fermentation, of putrefaction, and of slow combustion? How is the disappearance of the dead body or of the fallen plant to be accounted for? What is the explanation of the foaming of the mush in the village cask? Of dough, which, abandoned to itself, rises and becomes sour? Of milk, which curdles? Of blood, which putrefies? Of the heap of straw, which becomes manure? Of dead leaves and plants, imbedded in the earth, which transform themselves into soil?”

The ancient theory to account for this mystery received the indorsement of Liebig and was enunciated by him as follows: “The ferments are all nitrogenous substances—albumin, fibrin, casein; or the liquids which embrace them,

milk, blood, urine—in a state of alteration which they undergo in contact with the air.

“The oxygen of the air is, according to this system, the first cause of the molecular breaking up of the nitrogenous substances. The molecular motions are gradually communicated from particle to particle in the interior of the fermentable matter, which is thus resolved into new substances.”

Living organisms had been observed by a few investigators in certain fermentations, but their presence was regarded as a purely accidental fact, which, instead of favoring the phenomenon, was injurious to it. Without going into the details of his experiments, it suffices to say that from his first investigation of the lactic fermentation Pasteur was led to take an entirely different view. In this fermentation he recognized the presence and the actions of a living organism, which was the ferment. By ingenious experiments he established these facts beyond question and presented them in a memoir to the Academy of Sciences in 1857. The question of spontaneous generation next engaged his attention, and in 1860 he won the prize offered by the Academy of Sciences for the best essay on this question, his conclusion being, “spontaneous generation is a chimera.”

In 1861 he discovered that the agent of butyric fermentation consisted of little, moving, thread-like bodies; also that a microscopic organism was the cause of ammoniacal decomposition of the urine; in 1863 he established the fact that the bodies of animals in full health are sealed against the introduction of the germs of microscopic organisms; in 1863 he discovered the vibrio of putrefaction.

The publication of these facts brought the attention of Davaine back to observations which he had made in 1850 without appreciating their significance, when he was investigating splenic fever with Rayer: “That in the blood of splenic fever patients are found little, thread-like bodies about twice the length of a bloodvessel.” These observations, when repeated by Davaine in 1863, were vigorously

assailed, and the doubts thus raised were not finally refuted until Pasteur demonstrated the correctness of Davaine's assertions in an unanswerable manner. It is manifest that Pasteur's researches on the part played by microscopic organisms in fermentation had changed all the preconceived ideas about viruses and processes of disease. A great scientific fact had been established that a virus might consist of microscopic beings. The virulence was due to their life.

In 1865 an apothecary, Lemaire, published the researches, that he had been conducting for many years, on coal-tar and its most important ingredient, carbolic acid. By extensive experiments on higher and lower animals and plants he established the fact that this chemical material destroyed all organic life in a very short time. He asserted that the changes which were observed in wounds were likewise produced by living organisms; that suppuration was produced by germs that entered wounds from the air and then multiplied. "If this theory is correct," says Lemaire, "it must be possible to prevent suppuration by treating fresh wounds with an emulsion of coal-tar or with carbolic acid."

Joseph Lister, in Edinburgh, Scotland, first made a practical application of these discoveries of Pasteur and probably of those of Lemaire. His indebtedness to the former is acknowledged. In 1867 he published a paper in the *Lancet*, setting forth his first crude methods of excluding germs from wounds. "If," as he said correctly, "all decompositions are caused by external germs, those changes, so often observed in wounds with their harmful effects, must be produced by germs entering the wounds from without. By exclusion of these germs all decomposition in wounds must be capable of prevention. As these germs are everywhere present—in the air, in water, on the instruments, on the dressings—care must be exercised to destroy them by some suitable germicidal means, such as carbolic acid, before the materials come in contact with the wounds." On the basis of these theories he worked out a method of treating wounds

into the minutest details, tested them in the Edinburgh Infirmary, and, after proving the correctness of his views by practical demonstration, he presented them for the verdict of the medical world. Despite the force of his evidence and the enthusiasm of his advocacy, it took many years to obtain a recognition of so profound a reversal of all antecedent principles on which surgery had been based. In 1873 I saw Lister operate; but, swayed by the scoffings of all my preceptors, whose views I accepted unquestioningly, I failed to grasp the significance of his teaching. Notwithstanding the success of Lister's claims and methods, it must be remembered that proof of the relation between bacteria and pathological processes was not obtained until 1878, when R. Koch isolated, cultivated, and successfully inoculated the anthrax bacillus.

Of course, it was at once seen by ovariologists how vital this innovation of Lister's, if correct, would be in affecting the results of their work. Among the earliest to study Lister's methods was his fellow-townsmen and friend, Thomas Keith, who from 1869 to 1871 used a two per cent. solution of carbolic acid in sponging out the peritoneal cavity, who used antiseptic ligatures, and who had all his instruments rubbed with carbolic acid, without any improvement, however, in his results, but rather the reverse. He consequently gave up the method in ovarian work, trusting entirely to care and cleanliness. After the technique was improved by the addition of the spray he returned to the antiseptic method in 1876. Before this his mortality in the last 100 cases was under 10 per cent.; in the 50 operations performed subsequently under the spray he had lost but two patients, only 4 per cent. More striking results were gradually announced by other surgeons, but the Germans presented the most conclusive argument in favor of Listerism in a letter to Mr. Wells from Olshausen, in 1878, giving his results and those of Esmarch, Hegar, and Schroeder: without spray a mortality of 50 per cent. in 65 cases; with spray a mortality of

20 per cent. in 155 cases. By 1880 the antiseptic method for abdominal operations was pretty generally adopted the world over, with a reduction in the rate of mortality, from the outset, of more than 50 per cent.

All honor to Sir Joseph Lister for introducing the most important modifications of our surgical methods since the world began.

I have thus far confined my story entirely to a consideration of abdominal surgery for the purpose of the removal of ovarian tumors, because the whole development of abdominal surgery originated in ovariectomy. It now behooves me to call your attention to the other purposes for which the abdominal cavity is invaded. First among these is the removal of fibroid tumors of the uterus. The earlier operations for this purpose were done when fibroids had been erroneously taken for ovarian tumors. In 1885 Dr. Thomas Keith dedicated his monograph on "Hysterectomy" to our Fellow, Dr. A. J. C. Skene, of Brooklyn, in the course of which he says: "I offer you something that is not mine, but is of American origin; for though hysterectomy may have been performed by others by misadventure, if I greatly mistake not, the first case of uterine fibroid, diagnosed before operation, was removed by my old friend, Dr. Kimball, of Lowell." This is true.

It is not my purpose to follow the development of hysterectomy for fibroids; for though it presented special difficulties in its earlier days, it followed ovariectomy and was the first harvest from the knowledge acquired through the latter operations. Its history is very similar to that of ovariectomy and is largely written by the same hands: Kimball, Burnham, the two Atlees, Peaslee and Thomas, in America; Brown, Bantock, Keith, Savage, Wells, and Thornton, in England; Hegar, Billroth, Kalténbach, Schroeder, in Germany; Koeberlé and Péan, in France.

The fact established by ovariectomy, with the aid of antiseptics, that the peritoneal cavity could be opened with

impunity, has since led to operations upon all the organs contained therein. During ovariectomies the intestines were accidentally wounded, the rents were sewed together with perfect restoration of function; thereupon the abdomen was opened for the cure of fecal fistulæ, the removal of the inflamed appendix; for the relief of strictures of the intestines, whether by peritoneal bands or cancerous invasion of its canal; for the removal of gangrenous portions of intestines in inguinal or umbilical herniæ, to repair perforations by gunshots or by stabs, etc. Other organs in the abdominal cavity, enlarged by new growths or inflammations, were removed, such as the spleen, the kidneys, etc.; cancers of or foreign bodies in the stomach, gallstones, calculi in the kidneys and ureters were excised; floating kidneys were anchored; tumors of the liver were cut out; diseased Fallopian tubes were tied off; tubercular peritonitis was found to be curable by simple abdominal incision; Cæsarean section and Porro's operation were performed with marvellous success; the cancerous uterus was excised; the adhesions fixing a retroverted uterus were torn asunder and the displacement corrected by stitching the fundus to the abdominal wall, etc. The field of the surgeon was thus immensely extended; previously his work had been confined chiefly to the outside of the body; then he did not hesitate to explore every recess of the abdominal cavities and its contents. He did not stop there when he had learned that he had means to enable him to enter with impunity one of the great cavities of the body; he applied the knowledge and skill thus acquired to devising means of attacking the other cavities; he found that he could open the great joints without danger of entailing subsequent immobility; to reach the thoracic cavity he did not hesitate to excise segments of the ribs; and, finally, most miraculous of all, after locating the diverse functions of different parts of the brain, he bored through the cranium and lifted the depressed fragments of bone that caused epilepsy. He evacuated collections of blood or pus or removed new growths or

foreign bodies that, by pressure upon the nerve centres, were producing paralysis of distant limbs or impairment of intellectual processes. All this and much more is the outcome of ovariectomy.

So we find ourselves, at the end of the nineteenth century, with less reason to dread the opening of the abdominal cavity than our immediate predecessor had to dread even minor operations upon the body and limbs. The benefit of this advance to the individual and to the race is manifest; but I would beg you to pause a moment and consider with me if this operative mania has not gone too far—whether the time has not come when we must take an account of stock and differentiate more closely in the individual cases; whether a removal of the whole or a part of the generative organs of a woman is the only method available for the cure of the diseases or injuries to which these organs are liable; and, furthermore, whether such removal, while attended with but trifling immediate risk to her life, is to be regarded as the only resource which nature, supplemented by art, has of restoring a suffering woman to comfort and health. We have been told abundantly of the brilliant operations done; we have had spread out before us long series of cases in which the uterine appendages have been removed or the uterus itself extirpated; but have we learned what the future fate of these women has been? We know that fame and fortune have come to those among us who have been most successful in our ratios of mortality after operations; we do not know how many of the surviving patients have cause to bless us for our technical skill. No one can deny that for the race it is an unmixed evil to have a large percentage of our women, still in the childbearing age, rendered suddenly sterile beyond recall. No one can deny that it is an opprobrium on the healing art that we must remove organs, even though unessential to life, because we cannot cure them. Is not our suddenly acquired ability to do these operations leading us too far and too fast in sacrificing organs and functions

that might be preserved with benefit to the race and without detriment to the individual? A paragraph from the posthumous work of Leon Lefort, as published by Dr. T. C. Minor in the *Cincinnati Lancet-Clinic*, is much to the point:

“What are the causes of the *furia operativa* that more cruelly overwhelms foreign than modern French surgery? The first and most legitimate is the absolute and firm confidence—let us add, even blind confidence—that all surgeons seem to have who believe in antiseptic precautions. The general condition, diathesis, psychical or moral influence particular to the patient counts for nothing; all the danger is from atmospheric germs; and providing they can prevent the entrance of such, it is believed that anyone may open a belly or an articulation without the slightest danger. What good is it to waste time by a long and tiresome course of medical treatment when, by an operation whose evident dangers are refused recognition, one can cure quickly? What good is it to worry over such a trivial thing as a diagnosis when, by merely cutting a patient open, one can determine whether a suspected disease exists or does not exist?”

“A so-called surgeon recently expressed himself as follows: ‘My patient was aged nineteen years; she suffered from her bowels, and I could only establish my diagnosis by the touch; and, as she was a virgin, I feared to deflower her by making a vaginal examination. I thought it much preferable to make an exploratory incision in the abdomen, and found she had no disease.’ Think of it! To prefer opening the abdomen to the vaginal touch, when by very little precaution the touch may be practised while wholly respecting the hymen. This is modern gynecology with a vengeance!”

It daily falls to my lot, as one who has not been carried away by the present *prurigo secandi*, to see those women who have been operated upon by my more venturesome colleagues, and to find that results are by no means as uniformly successful in relieving symptoms as the operators are wont to report.

The cessation of function in the generative organs of woman has always been rightly regarded as a period fraught with serious and protracted disturbances of the general system. It is contrary to reason to suppose that the artificial arrest of these functions by the removal of a part of the system can be practised without even greater peril than when nature effects this end. The natural menopause is attended with a profound derangement of the nervous system, not infrequently with impairment of the mental faculties; it is followed commonly by an excessive accumulation of adipose tissue; it is uniformly followed by an atrophy of the whole genital tract, with diminution in the calibre of the vagina, which renders the woman incapable of fulfilling her marital duties. All these sequelæ of the natural menopause are likely to occur, and have, in my experience, occurred, as a result of the operations which we are now considering. How much more pronounced are these ultimate effects likely to be in a woman in whom the change of life is artificially produced in the early years of her genital life, when nutrition and the other functions are in full vigor. Of course, if the mishaps attendant upon childbearing and the diseases invading the sexual organs are incurable by other means than the surgeon's knife, exposure to these sequelæ of the menopause may be the lesser of the two evils; but let us not operate without an eye to the future as well as the present. We are all aware that the great dread of all women—cancer—is likely to occur during the climacteric years; we do not know whether the cessation of that function is the determining cause of this greater prevalence, and whether we may expect a like effect to attend or follow a menopause brought about artificially at an earlier age.

The time has come when another almost untrodden field is spread out before us. I mean investigation and experiment to see if methods cannot be devised for treating diseased tubes and ovaries, after the abdominal cavity is opened, without complete extirpation. An attempt in that direction was

reported to this Society in 1893, by Dr. Polk, when he described operations in which only portions of the ovaries were removed. This is looking in the right direction. Should we not be experimenting to see if we cannot evacuate serum or pus from an occluded Fallopian tube without sacrificing it and its corresponding ovary, as is the custom? Should we not familiarize ourselves with nature's method of cure of an inflamed tube? I recall a case in which I opened the abdomen two years ago for the relief of retroversion, with adhesions of the fundus to the rectum. I found both tubes occluded at their fimbriated extremities and containing a slight amount of fluid, which I assumed to be serum, not pus. Against the protests of my two assistants I left the tubes untouched on the ground that they had been healed by a process of nature, and contented myself with stitching the fundus to the abdominal peritoneum. The woman has been perfectly well ever since, and has, I believe, a much better chance of a comfortable existence than she would have had if I had removed both tubes and ovaries, as I should have done had I been of a less conservative temperament.

I do not expect the above remarks to carry conviction to those who are elated with their surgical achievements; but they are conclusions that I have reached and speculations in which I have ventured to indulge, after twenty-four years of special practice, in which I have done my fair share of operating, and I trust they will be deemed worthy of your consideration.

“I have brought thee a posie of other men's flowers; only the thread that binds them is mine own.”—*Montaigne*.

